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Saskatchewan Parks and Renewable Resources

Saskatchewan Game Management 1985-86

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SASKATCHEWAN
GAME MANAGEMENT
1985 - 1986

Compiled by
Saskatchewan Parks and Renewable Resources
Wildlife Branch
Population Management Section
3211 Albert Street
REGINA, Saskatchewan
S4S 5W6

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ABSTRACT

HUNTING LICENCE SALES AND GAME HARVEST ESTIMATES
1983 to 1985

	Licence Sales				Harvest		
	1983*	1984*	1985*		1983	1984	1985
1. Game Birds							
Sask. Resident	47,157	40,102	38,243				
Canadian Resident	2,978	2,125	2,181				
Non-Resident	3,741	3,277	3,497				
TOTAL	53,876	45,504	43,921				
Ducks					326,000	183,000	153,000
Geese					213,000	162,000	176,000
Sandhill Crane					3,000	3,100	6,200
Sharp-tailed Grouse					59,000	54,000	41,800
Hungarian Partridge					61,000	60,000	42,000
Ruffed Grouse					13,500	13,000	15,100
Spruce Grouse					4,000	4,300	4,200
Pheasant **					15,900	12,200	7,100
GAME BIRD TOTAL					695,400	491,600	445,400
2. Big Game							
White-tailed Deer	55,600	55,536	46,873		33,574	38,026	19,557
Moose	10,073	9,904	10,469		2,113	3,223	2,066
Elk	4,081	4,482	4,322		555	1,051	478
Mule Deer	7,209	12,085	15,640		6,231	10,680	15,991
Antelope	2,411	2,717	2,921		2,010	1,985	1,694
Bear	4,375	4,899	7,534	***	1,071	1,778	1,038
Woodland Caribou	152	182	152		27	23	24
Archery							
White-tailed Deer	1,411	1,534	1,357		220	341	167
Moose	29	41	38		2	0	2
Mule Deer	775	804	969		256	270	320
Antelope	248	298	260		55	46	24
Muzzleloading							
White-tailed Deer	575	684	577		197	453	137
BIG GAME TOTAL	86,939	92,995	91,112	***	46,311	57,876	41,498
			87,970	****			

GROSS REVENUE FROM LICENCE SALES

	1983	1984	1985	1985 vs 1984 % Change
Game Birds	994,570	834,970	841,180	+1%
Big Game	2,338,275	2,592,640	2,518,125	-3%
TOTAL	3,332,845	3,427,610	3,359,305	-2%

* final (June 4) sales figure

** no pheasant licence required from 1983 to 1985

*** includes 4,392 purchased bear licences and 3,142 free tags issued to big game licence holders for WMZ 58 to 61.

**** for comparative purposes licence sales exclude 3,142 free bear tags.

EXECUTIVE SUMMARY

Big Game

Licence sales totalled 87,970, (excluding free bear tags) representing a 5 per cent decline from 1984 and similar to the 1983 estimate of 86,939 licences. Big game licence revenue also declined 3 per cent but remained high at over $2.5 million. Licence sales remained relatively stable for all species except for a quota increase for mule deer and a substantial decline in white-tailed deer licences due primarily to the cold weather during the November hunting season.

As a result of this cold weather the provincial **white-tailed deer** harvest was reduced by 49% to 19,724 deer, the lowest harvest in recent history. Although low harvests were reported from all ecological zones winter aerial surveys in the Parklands of southeastern Saskatchewan indicate that populations may be lower than anticipated and that poor hunter success may be partially the result of low deer numbers. Populations in the Grasslands and western Farmlands continue to improve. Deer populations in the Forest, Forest Fringe and northern Parklands remain stable. All populations are excepted to improve in 1986 as a result of the mild 1985-86 winter and excellent spring fawning conditions.

The harvest of **moose** declined to 2,068 animals, similar to 1983 but 36 per cent lower than 1984, largely as a result of the cold temperatures during the late bull/calf season. A moose season was not held in Moose Mountain Park, Cypress Hills Park and the Thickwood Hills in 1985. Moose populations appear to be improving in the eastern and western parts of the Northern provincial Forest but remain extremely low in central Saskatchewan.

The 1985 **mule deer** harvest of 16,311 animals was the highest on record, primarily as a result of increased licence quotas and a bag limit of 2 antlerless deer per licence. Management efforts, aimed at the antlerless segment of the herd were successful in lowering populations sufficiently to alleviate landowner/wildlife problems, optimizing recreation opportunity and stabilizing herd structure.

The harvest of 1,718 **antelope** was 15 per cent down from 1984 with a similar decline in hunter success rates despite relatively good hunting conditions. Hunters and landowners reported antelope crossing zone boundaries prior to the season a situation that may have influenced hunter opportunity. Based on the July 1986 aerial survey antelope densities are 14 per cent higher than in 1985 with an estimated provincial population in excess of 12,000 animals. With 0.84 kids/100 does reproductive success was substantially higher than drought-stricken 1985 (0.63) and the long term average of 0.67 kids/100 does.

The 1985 **elk** harvest declined 55 per cent from 1984. Hunter reports of fewer mature bulls in the northern commercial forest and low bull/cow ratios in the winter aerial survey suggest that the mature bulls may be overharvested from a recreation opportunity perspective. The late elk season will be closed for 1986 in order to help relieve some of the hunting pressure on mature bulls. Populations in the Cypress Hills, Thickwood Hills and Moose Mountain Park continue to expand.

Although sport harvest and hunting pressure remains low for **woodland caribou**, wildlife managers are concerned that hunting may be adding significantly to the impact of road access and forest harvesting in eliminating or greatly reducing local herds. Aerial surveys from the Weyakwin area, thought to be representative of good caribou range, indicate densities of 0.02 caribou/km^2, less than one-fifth the densities reported from the Dore Lake area in 1960.

The 1986 big game hunting seasons are highlighted by a number of changes to season lengths, bag limits and personal hunting opportunities. Although white-tailed deer populations in southeast Saskatchewan have declined, the season will remain 2 weeks in length. However, hunting in WMZ 16, 17, 31 to 34, and 37 to 39 will be restricted to Saskatchewan residents only. Other regulatory changes were considered but not implemented because of the low harvest in 1985 and management efforts to redirect hunting pressure for 1986. The white-tailed deer season in southwest Saskatchewan will be extended to 2 weeks from 9 days in 1985 in response to anticipated growth in the populations. An antlerless white-tailed deer season will be implemented in WMZ's 2 and 6 in an effort to direct more harvest pressure towards does and fawns and slow population growth. To control hunter participation and harvest, only regular either-sex or antlerless mule deer licence holders will be able to purchase an antlerless white-tailed deer licence to hunt antlerless whitetails during their respective mule deer season.

There are no major changes to moose seasons with the exception of a 25 licence quota in WMZ 6, a reduction of licence quotas in WMZ 67, and the inclusion of WMZ 68 in the all terrain vehicle restrictions so that ATV's may only be operated between noon and midnight. Rapid expansion of the seismic trail network in WMZ 68 warrants implementation of the morning ATV use prohibition to reduce the negative impact of ATV's on other hunters and the moose population.

Quotas again have been established for both either-sex and antlerless mule deer harvests in most zones. Following 1985's significant antlerless harvest, fewer antlerless deer can be harvested so the 2 deer bag limit in 1985 will be reduced to one deer/licence holder in 1986. A special muzzleloader rifle season will be introduced in 1986 (150 either-sex and 150 antlerless licences) due to growing interest in muzzleloading hunting. The muzzleloader mule deer seasons will be held September 29 to October 11, overlapping with the muzzleloader whitetail season. In 1986, young hunters 12 to 15 years of age will be allowed to apply for an antlerless mule deer licence as a mechanism to introduce beginning hunters to big game hunting and enhance demand for antlerless licences.

The late regular elk season will be eliminated in an effort to reduce the mature bull harvest and resolve landowner-hunter conflicts in WMZ 56 and the Forest Fringe zones. A special 50 licence elk season will be held in that portion of WMZ 54 south of Highway No. 3 from November 10 to 15, in response to increased populations following the 1982 elk transplant in the Thickwood Hills. The WMZ 53 regular elk season will be reduced to 3 weeks from 6 weeks in 1985 in an effort to reduce landowner-hunter conflicts and more accurately reflect hunter and elk activity periods.

For antelope, WMZ's 2 and 5, 8 and 11, and 12 and 13 will be treated as combined zones to reduce the problems associated with antelope crossing zone boundaries prior to, or during, the season. The quota will increase by 25 licences in total to reflect increased populations and zone changes.

Woodland caribou hunting will be restricted to WMZ 70 to 75, resulting in cancellation of hunting in WMZ 58, 59, 61 to 66 and 69. Caribou hunting in WMZ 70 to 75 will be maintained in 1986 to enable the oufitters who had previously booked clients for the 1986 hunt to satisfy their obligations and to allow Saskatchewan residents an alternative hunting opportunity. Additional work is planned to determine densities in other zones and derive a provincial caribou population estimate. At this time the Department plans to cease woodland caribou hunting entirely in 1987.

Game Birds

1985 **licence sales** totalled 43,921 compared to 45,504 in 1984. Provincial residents purchased 5 per cent fewer licences while out of province Canadian licence sales were up 3 per cent and non-resident licences up 7 per cent. Cock pheasant licences were not required in 1985. Lower populations of mallards, sharp-tailed grouse and pheasants were primarily responsible for the reduction in licence sales. About 450,000 game birds were harvested in 1985 compared to the 1974-83 average of 870,000 birds.

The major change in waterfowl regulations in 1985 was the lowering of the duck bag limit to four birds per day compared to the limit of eight during the 1979 to 1984 seasons. Active waterfowl hunters totalled 33,000 in 1985 but remained 30 per cent below the ten year average of 47,500. Good goose hunting held hunter activity slightly above 1984 levels.

The **duck** harvest of 153,000, 73 per cent of which were **mallards** was down 16 per cent from the 183,000 reported in 1984 and the lowest harvest on record. The 1985 mallard reproduction index of 2.13 immature per adult was slightly above the average of 2.03. 1986 May pond counts of 2.35 million were down 20 per cent from 1985 but remained 15 per cent above the 1976-85 average. Mallards breeding in southern Saskatchewan were estimated at 1.6 million up 30 per cent from 1985 but still 20 per cent below average. Pintail and canvasback numbers were similar to 1985 but blue-winged teal and redheads were not as abundant. In an effort to revive hunter interest in ducks, the 1986 bag limit has been raised to six ducks per day. Due to continued continental concern for the mallard the daily bag for this species remains at four. Saskatchewan Parks and Renewable Resources feels that the 25 per cent harvest reduction on mallards called for in the North American Waterfowl Management Plan can be maintained even with the slight increase in the 1986 bag limit.

The 1985 **goose** harvest increased to 176,360 birds from 162,000 reported in 1984. **White-fronted geese** and **snow geese** each accounted for 22 per cent of the harvest while the **Canada goose** harvest of 95,250 accounted for 54 per cent. 1986 spring surveys showed local nesting Canadas up 30 per cent from 1985. Arctic goose production should be near 1985 levels although snow and Ross' geese nesting efforts in the western Arctic apparently failed due to late spring break up. 1986 goose hunting should be good and bag limits remain the same.

The 1985 **sandhill crane** harvest doubled to 6,200 birds with the Last Mountain Lake area providing three quarters of the harvest.

Sharp-tailed grouse are still the number one upland game bird in Saskatchewan but the 1985 harvest fell 23 per cent from 1984 to 41,800 birds, the lowest level since 1974. 1985 reproduction in the Grasslands was the best in five years and populations appear to be in a state of recovery. Provincially, the 1985 reproductive index (from wing samples) was 1.71 juveniles per adult in the harvest. 1986 spring breeding surveys in 30 areas show a 41 per cent increase from 1985. Habitat conditions have improved this year and the drought ended in many areas. Although populations will be better, the 1986 bag limit was held at three birds per day. The one week season delay implemented in 1982 has been dropped and the season will open September 22 in the south.

For the third consecutive year **Hungarian partridge** harvest surpassed the sharp-tailed grouse harvest in Saskatchewan. Although only 42,000 partridge were harvested in 1985, this little game bird is recovering from the harsh winter of 1984-85. The reproductive index for 1985 was 3.6 juveniles per adult in the harvest, up 20 per cent from the long term average. 1986 spring surveys of almost 350 farmsteads show a 53 per cent increase in the population with significant recovery in the Parklands. Populations have generally remained stable in the Grasslands. Bag limits have been increased in some Farmland and Parkland zones. Prospects for hunting partridge are good for the fall of 1986.

Only 3,700 **pheasant** hunters took to the field last fall harvesting 7,085 cocks compared to 12,180 harvested in 1984. Active hunters decreased by 26 per cent and hunter days by 32 per cent. Only 9 per cent of the reported harvest occurred after December 2 in the traditional late season and it has been cancelled for 1986. 1985 reproduction was poor as much of the prime range endured drought conditions again. 1986 spring surveys along 13 routes show a similar spring population to 1985 with an average of 1.78 crow calls per survey stop. Five of the survey areas did show increases this spring. With better moisture this year populations may recover slightly but hunters should not expect a good year. The bag limit has been maintained at 3 cocks per day and early season dates are similar to 1985.

Ruffed grouse are finally recovering from a low in their cyclic populations. Last fall less hunters harvested more birds with a reported kill of 15,074 ruffed grouse. The 1985 reproductive index from wing samples was 3.45 juveniles per adult which is 64 per cent above the 1979-83 average.

1986 spring surveys along 23 routes show an overall increase of 6 per cent. The index is up 42 per cent for comparable routes in the Forest Fringe. Since populations are just starting to recover, bag limits and season dates are similar to 1985. Ruffed grouse hunting should improve for the next four or five years.

The 1985 **spruce grouse** harvest of 4,230 birds was similar to 1984. Spruce grouse are not considered a great table bird and harvest usually increases only when ruffed grouse populations peak. Season dates and bag limits are similar to 1985.

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The Department is indebted to the hunters of Saskatchewan for providing, through the Hunter Questionnaire Surveys, the hunting information which forms the backbone of this report.

The significant contribution of SPRR Operations staff to game management in Saskatchewan is also recognized. They collect many of the biological samples used to determine the age and sex compositions of the kill, and are instrumental in conducting the spring game bird population surveys and assisting on big game aerial surveys. The Conservation Officers in the districts also frequently serve as our eyes and ears, reporting qualitative information pertinent to wildlife.

PREFACE

This report succeeds the **"Report of Hunter and Game Population Surveys"** published annually by this Department from 1976 to 1980, and commonly referred to as the **"Hunter Survey Report"** after the pre-1976 annual reports. It is intended to provide more comprehensive documentation of annual game management. To this end, there is much more discussion and analysis of that data than in the past, and events are traced from one set of yearly hunting regulations to the next.

In 1984, a major revision of the analysis and reporting procedure of the Big Game Hunter Questionnaire data was undertaken. Significant changes to the questionnaire design were also introduced in 1985 to reduce reporting error, duplication and bias inherent in earlier versions of this questionnaire.

Unlike the 1983-84 report, references to the old game management zones have been omitted and all information is gauged to the new wildlife management zones introduced in 1984.

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BIG GAME

GENERAL

1985 HUNTING REGULATIONS

Hunting season dates, bag limits and licence quotas per big game species are presented in Appendix 1.

All mule deer and antelope licences, plus special moose and special elk licences, were available only through a computerized draw (Appendix 2). As in previous years resident hunters could purchase a bull/calf moose licence and an antlered elk licence if they were not successful in the special licence draw for these species. Two hundred and thirty-nine guided moose licences were also sold to non-residents of Saskatchewan. White-tailed deer, black bear and woodland caribou licences were available to all resident, Canadian resident and non-resident hunters. Only residents of WMZ 76 were eligible for a barren-ground caribou licence.

Hunters were allowed to purchase only one white-tailed deer licence for all Wildlife Management Zones except for an additional antlerless licence in WMZ 31 and 32 for resident hunters.

DATA COLLECTION TECHNIQUES

Licence Sales

Department of Parks and Renewable Resources, Revenue Section, tabulated and mailed computerized draw licences directly to hunters.

White-tailed deer, woodland caribou, black bear, regular moose and regular elk licences are purchased through approximately 1,200 commercial vendors and S.P.R.R. district offices distributed throughout the province. Vendors return sold and unsold licences to S.P.R.R. Revenue who are then able to determine provincial licence sale figures for each big game species.

Hunter Survey

In November 1985, 27,500 resident, Canadian resident and non-resident alien hunters were mailed big game questionnaires (Appendix 3). These hunters were randomly selected from among the 1984 big game regular licence holders and the 1985 computerized draw licence holders.

Follow-up questionnaires were mailed in mid-December 1985 to hunters that did not reply to the first questionnaire. The cut-off date for return of questionnaires was February 15, 1986. The forms returned were edited and the data entered into a computer. The data print-out was available for analysis by March 27, 1986 encorporating useable data from 15,223 questionnaires or 55 per cent of the total questionnaires mailed to hunters.

Checking Stations

All hunters using designated check stations for big game in Saskatchewan were eligible to enter a draw for major prizes. All hunters providing biological samples received a Wildlife Co-operator Lapel Pin.

Two S.P.R.R. checking stations were used along with 10 private co-operator collection points to obtain age and sex information for moose and elk. Age determinations for animals older than calves were based on tooth (incisor) cementum deposition.

S.P.R.R. Wildlife staff operated two white-tailed deer check stations during the regular deer season to gather sex and age harvest data.

Antlerless mule deer harvest information was obtained at five locations operated by Department personnel. A check station was also manned during both splits of the regular, either-sex season in WMZ 12.

Population Surveys

Aerial surveys are conducted during the winter months to determine population levels, herd segregation and productivity information for selected moose, white-tailed deer, mule deer, woodland caribou and elk populations. January and February white-tailed deer population estimates were obtained using a stratified random block survey design. Moose line-transect surveys and stratified random block surveys were employed to provide trend and population data, respectively, for winter moose populations. Trend data on antelope populations were obtained from July line-transect aerial surveys. Mule deer population quadrat and line-transect surveys were conducted within selected areas to document population status in major southwestern habitat blocks.

Sex and age structure estimates for moose, elk, white-tailed deer, mule deer and antelope were based on data collected by aerial sampling of selected populations. The number of males, females, and young of the year provide information on population structure.

A population structure investigation (Co-operative Wildlife Management Study) continued for all big game species with the assistance of Conservation Officers, Saskatchewan Wildlife Federation members and the general public (Appendix 4). Co-operators classified observed animals by sex (adult male vs adult female) and age (fawn vs adult) class, and provided detailed information on antler development of males.

Wildlife Management Zones

The new wildlife management (WMZ) map introduced in 1984 is a standard reference throughout this report (Appendix 5). For obvious reasons, direct comparisons between these zones and the former game zones should not be made.

1985 HARVEST AND RECREATION STATISTICS

Table 1 provides a detailed summary of the 1985 licence sales, number of active hunters, hunter harvest, hunter success and number of recreation days expended for each species and licence type.

Table 1. 1985 Big Game Harvest and Recreation Statistics Summary

Species	Licence* Sales	Active* Hunters	Hunter Harvest	Hunter Success	Days of Recreation
White-tailed Deer					
Regular	46,454	43,363	19,101	44%	135,801
Antlerless	419	1,029	456	44%	1,541
Archery	1,357	1,170	167	14%	8,393
Muzzleloading	577	509	137	27%	1,942
Sub-total	48,807	46,071	19,861		147,677
Moose					
Regular	8,125	7,447	1,413	19%	33,710
Special	2,105	2,021	653	32%	8,988
Guided	239	UNK**	UNK**	UNK**	UNK**
Sub-total	10,507	9,504	2,068		42,859
Mule Deer					
Regular	6,571	6,263	4,566	73%	11,179
Antlerless	9,069	8,991	11,425	75%(1st) 52%(2nd)	14,219
Archery	969	871	320	37%	4,037
Sub-total	16,609	16,125	16,311		29,435
Antelope					
Regular	2,921	2,768	1,694	61%	4,842
Archery	260	209	24	11%	754
Sub-total	3,181	2,977	1,718		5,596
Elk					
Regular	3,237	2,863	275	10%	12,305
Special	1,085	894	203	23%	4,018
Sub-total	4,322	3,757	478		16,323
Black Bear					
1st Regular	4,048	3,398	867	26%	14,352
2nd Regular	344	154	24	16%	692
Free Tags	3,142	1,571	147	9%	5,879
Sub-total	7,534	5,123	1,038		20,923
Woodland Caribou	152	125	24	19%	420
TOTAL	91,112	83,682	41,498		263,233

* Includes resident, Canadian resident and non-resident hunters
** UNK = unknown because guided moose hunters were not sampled

WHITE-TAILED DEER

A. REVIEW OF 1985 HUNTING SEASON

1. Licence Sales

	1980	1981	1982	1983*	1984*	1985*	% Change
1st Licence Sales							
Resident	64,339	63,543	57,320	50,309	49,603	45,532	-8%
Canadian Resident	974	1,316	1,095	607	705	786	+11%
Non-resident	80	124	68	68	60	136	+127%
2nd Licence Sales							
Resident (Antlerless)	—	—	—	—	—	419	—
Resident	—	6,757	6,433	4,594	4,971	—	—
Canadian Resident	—	49	41	19	9	—	—
Non-resident	—	—	21	0	6	—	—
TOTAL	65,393	71,810	64,957	55,600	55,356	46,873	-15%
Resident Archery	1,004	1,376	1,590	1,411	1,543	1,357	-12%
Muzzleloading	—	—	368	575	684	577	-15%
TOTAL	66,397	73,186	66,915	57,586	57,583	48,807	-15%

* Final (June 1) sales figures; however all data analysis based on figures available in March and projected to June 1.

2. Hunting Activity and Harvest

- The November white-tailed deer season in 1985 was one of the coldest on record with temperatures in the -30^0 to -40^0 C range accompanied by high wind chill factors. Hunters reported that deer were scarce and they were reluctant to hunt on foot due to the cold temperatures. Those hunters that did push bush reported that the deer were bedded down during the entire day and difficult to locate until the weather warmed up in early December for the antlerless season in WMZ 31 and 32.
- On a provincial basis active hunters decreased 14% from 53,864 in 1984 to 46,071 in 1985 (Table 2, Figure 1). Harvest declined 49% from 38,820 (1984) to 19,860 (1985) and represents the lowest provincial harvest on record. The Parkland, Farmland, Grassland, Forest and Forest Fringe ecological zones represented 37%, 28%, 19%, 9% and 7% of the provincial harvest, respectively, percentages consistent with previous years (Table 3).
- Recreation days increased 14% from 128,285 days (1984) to 147,678 days (1985) despite the harvest reduction (Table 4). A combination of lower provincial success (43%) and an increase from 3 to 7 hunter days/kill contributed to the increase in recreation days.
- The Grassland regular harvest of 3,714 deer was 38% lower than 1984 with the heaviest harvest occurring in WMZ 1, 4, 2, 6 and 14 (Table 5). Despite large numbers of deer associated with haystacks in WMZ 2 and 6, the Grassland success rates declined from 85% (1984) to 47% (1985), largely as a result of the cold November weather.
- The Farmland regular harvest of 5,374 deer was 51% lower than 1984 with the heaviest harvest occurring in WMZ 15 (southeast), WMZ 29 and 30 (around Saskatoon) and WMZ 21 (north of Regina) (Table 6). The most significant deline within the Farmland zones was WMZ 16 and 17 where harvests declined 65% from 1984. The severe 1984-85 winter removed a large portion of the fawn cohort that subsequently wasn't available to hunters as yearling animals during the 1985 season. The population aerial surveys also suggest that there has been a general decline in white-tailed deer numbers, primarily in the southeast parkland zones, but also overlapping into WMZ 16, 17, 20 and 21 as a result of the 1984-85 severe winter.

Table 2. Provincial White-tailed Deer Harvest 1985

RR3320-2 PROJECTED TABLES

SUMMARY TOTALS FOR SPECIES: WHITE TAIL DEER

EZONE	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
GRASS	8,427	9,623	3,835	45.5	3,840	3.40	1	0.21	19,075	5	0.2944
FARM	12,924	17,308	5,486	42.4	5,486	1.93	1	0.32	40,442	7	0.4448
PARK	16,871	20,854	7,384	43.8	7,384	1.99	1	0.37	52,869	7	0.5379
FRINGE	2,999	4,272	1,336	44.5	1,336	2.42	1	0.26	12,270	9	0.4676
FOREST	4,850	7,024	1,810	37.3	1,815	2.43	1	0.31	23,021	13	0.1567
SHIELD	0	0	0	0.0	0	0.00	1	0.00	0	.	.
TOTAL	46,071	59,080	19,850	43.1	19,860	2.25	1	0.32	147678	7	0.3457

Figure 1. Saskatchewan White-tailed Deer Sport Hunter Harvest, Recreation Days and Effort 1970-85.

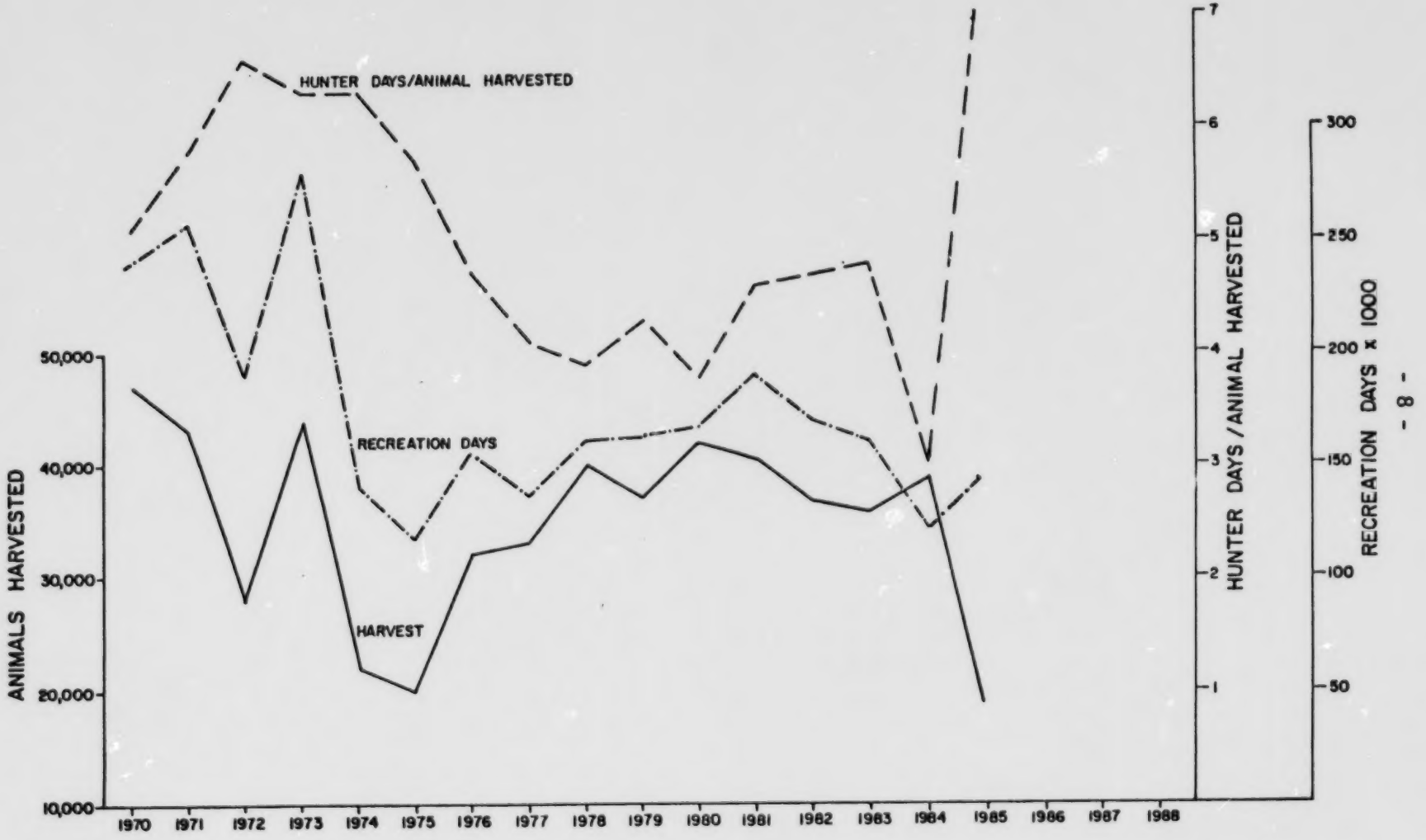


Table 3 Provincial White-tailed Deer Harvest 1979-1985

Ecological Division	Harvest							Percent Hunter Success						
	1979	1980	1981	1982	1983	1984	1985	1979	1980	1981	1982	1983	1984	1985
Grassland	5,035	3,524	4,224	4,243	3,893	6,110	3,840	56	62	56	61	61	83	47
Farmland	12,692	10,830	13,263	11,897	12,629	11,287	5,486	53	55	53	44	55	78	44
Parkland	13,089	17,376	15,109	13,047	11,255	13,508	7,384	56	63	55	52	57	78	44
Forest Fringe	—	—	—	—	—	2,145	1,336	—	—	—	—	—	67	45
Commercial Forest	6,363	11,024	8,553	7,029	5,797	5,669	1,815	44	40	—	—	—	59	37
1st Licence Holder	—	—	5,912	4,615	3,938	3,077	—	—	—	—	38	33	33	57	—
2nd Licence Holder	—	—	2,641	2,414	1,859	2,592	—	—	—	—	43	45	46	62	—
Total	37,179	42,754	41,149	36,216	33,574	38,820	19,860	52	60	50	47	53	75	43

Table 4. Provincial White-tailed Deer Hunting Pressure 1981-1985

Ecological Division	Hunter Days					Hunter Days/Animals				
	1981	1982	1983	1984	1985	1981	1982	1983	1984	1985
Grassland	14,441	14,214	12,453	12,032	19,075	3.4	3.4	3.2	2	5
Farmland	50,058	48,212	48,474	30,286	40,442	4.7	4.1	3.8	3	7
Parkland	66,230	55,313	49,791	39,967	52,869	5.9	4.2	4.4	3	7
Forest Fringe	—	—	—	9,365	12,270	—	—	—	4	9
Commercial Forest	59,394*	51,891*	47,937	29,619	23,021	6.9	7.4	8.3	5	13
Total	190,123	169,630	159,235	121,268	147,678	4.6	4.7	4.8	3	7

* Total 1st and 2nd licence hunting activity.

Table 5 . Grassland Regular Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	1,137	1,285	485	42.7	485	3.45	1	0.40	2,644	5	0.3177
2	876	990	410	46.8	410	7.10	1	0.10	1,787	4	0.1679
3	133	150	65	49.0	65	3.33	1	0.00	362	6	0.0843
4	893	1,010	475	53.2	475	2.96	1	0.17	1,557	3	0.1918
5	624	705	265	42.5	265	3.90	1	0.40	1,132	4	0.1898
6	792	895	410	51.8	410	6.36	1	0.09	1,650	4	0.3932
7	256	290	140	54.6	140	5.75	1	0.25	532	4	0.2809
8	137	155	50	36.5	50	2.00	1	0.33	210	4	0.0619
9	610	690	260	42.6	265	5.37	1	0.25	1,222	5	0.3557
10	632	715	340	53.7	340	2.76	1	0.24	1,440	4	0.4060
11	203	230	115	56.5	115	1.75	1	0.13	427	4	0.4339
12	155	175	55	35.5	55	3.50	1	1.00	332	6	0.9663
13	513	580	240	46.8	240	2.36	1	0.07	917	4	0.2246
14	929	1,050	400	43.1	400	1.89	1	0.07	1,917	5	0.3435
	7,889	8,918	3,709	47.0	3,714	3.44	1	0.20	16,129	4	0.2489

Table 6. Farmland Regular Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FARMLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
15	897	1,205	650	72.5	650	1.37	1	0.18	2,069	3	0.3078
16	900	1,210	410	45.5	410	1.81	1	0.35	2,304	6	0.4341
17	607	815	225	37.1	225	2.70	1	0.80	1,809	8	0.4733
18	979	1,315	485	49.5	485	1.83	1	0.52	2,297	5	0.3084
19	744	1,000	320	43.0	320	2.35	1	0.41	1,857	6	0.2014
20	540	725	185	34.3	185	2.44	1	0.67	1,522	8	0.2750
21	1,165	1,565	560	48.1	560	1.73	1	0.30	3,826	7	0.4565
22	491	660	185	37.7	185	1.67	1	0.42	1,647	9	0.3481
23	688	925	245	35.6	245	2.07	1	0.43	1,926	8	0.3356
24	525	705	240	45.7	240	3.27	1	0.09	1,167	5	0.2417
25	402	540	205	51.0	205	1.57	1	0.36	957	5	0.1645
26	220	295	80	36.4	80	2.75	1	0.25	640	8	0.1417
27	376	505	175	46.6	175	1.67	1	0.25	1,027	6	0.2090
28	454	610	245	54.0	245	1.20	1	0.25	1,412	6	1.0421
29	1,473	1,979	600	40.7	600	2.53	1	0.22	4,978	8	0.9335
30	1,753	2,354	565	32.2	565	2.21	1	0.21	6,238	11	0.8603
	12,212	16,405	5,374	44.0	5,374	1.93	1	0.32	35,678	7	0.3924

- The Parkland regular harvest of 6,888 deer was 49% lower than 1984 with the heaviest harvest occurring in WMZ 32, 31, 46, 37, 39 and 41 (Table 7). WMZ 31-34 (southeast), WMZ 35-43 (east central) and WMZ 44-47 (northwest) comprised 32%, 27%, and 28% of the harvest, respectively, compared with 40%, 35% and 24% of the harvest in 1984.
- In WMZ 37 the change in 1985 from bucks-only to 1 week bucks-only and 1 week either sex could not be adequately assessed. Even under the more liberal hunting regime the cold November weather and impact of the 1984-85 winter resulted in a 37% decline in harvest.
- The Forest Fringe regular harvest of 1,320 deer was 37% lower than 1984 with 75% occurring in WMZ 54, 52, 55, 53 (northwest) (Table 8).
- The Forest regular harvest of 1,805 deer was 40% lower than 1984 with the eastern forest zones (WMZ 56 - 59) and western forest zones (WMZ 67 - 69) comprising 48% and 37% of the harvest, respectively (Table 9).
- High winter mortality following the 1984-85 severe winter, a steady decline in populations in the southeast parkland zones since 1983 and the cold November weather are factors contributing to the poorer success (44%) and low harvest in 1985.

3. Harvest Structure

(a) Hunter Questionnaire

- Provincial harvest structure was 224 bucks/100 does/32 fawns, similar to the 211 bucks/100 does/35 fawns reported in 1984 and 237 bucks/100 does/34 fawns reported in 1983 (Table 10).
- The highest buck/doe harvest ratio was reported for the Grassland zones at 337 bucks/100 does. Fewer bucks (197 bucks/100 does) were taken in the Parkland zones than in either 1983 or 1984, probably as a result of poor hunting conditions and a lack of yearling bucks in the population. There was a higher number of bucks taken per doe in the Forest Fringe (244 bucks/100 does) and Forest (238 bucks/100 does) than in 1984.

Table 7 . Parkland Regular Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: PARKLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
31	1,104	1,375	640	57.9	640	1.76	1	0.29	2,637	4	1.0455
32	1,667	2,074	915	54.9	915	1.22	1	0.26	4,049	4	1.4512
33	1,008	1,255	365	36.2	365	2.04	1	0.13	2,457	7	0.6327
34	972	1,210	310	31.9	310	2.93	1	0.50	2,864	9	0.5318
35	353	440	155	43.8	155	2.83	1	1.33	1,112	7	0.4255
36	474	590	155	32.7	155	3.67	1	0.50	1,315	8	0.2535
37	1,169	1,455	525	44.9	525	3.62	1	0.38	4,414	8	0.3901
38	510	635	175	34.3	175	174.95	1	0.00	1,837	11	0.2865
39	972	1,210	485	49.9	485	2.46	1	0.27	3,234	7	0.4254
40	418	520	155	37.1	155	1.25	1	0.33	1,205	8	0.2225
41	1,128	1,405	485	43.0	485	2.07	1	0.28	3,774	8	0.5233
42	884	1,100	395	44.7	395	4.08	1	1.00	3,297	8	0.4447
43	422	525	175	41.5	175	2.10	1	0.40	1,267	7	0.1912
44	1,157	1,440	455	39.3	455	3.69	1	1.00	3,502	8	0.7650
45	1,145	1,425	445	38.9	445	3.32	1	0.37	4,174	9	0.5445
46	1,285	1,600	585	45.5	585	2.06	1	0.38	5,259	9	0.8825
47	884	1,100	470	53.2	470	2.48	1	0.28	3,112	7	0.5441
	15,550	19,355	6,888	44.3	6,888	2.35	1	0.38	49,506	7	0.5036

Table 8. Forest Fringe Regular Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	144	205	30	20.9	30	5.00	1	0.00	500	17	0.1975
49	147	210	70	47.5	70	6.00	1	0.00	670	10	0.2797
50	431	615	175	40.6	175	1.42	1	0.50	1,979	11	0.5939
51	252	360	60	23.8	60	1.50	1	0.50	1,025	17	0.3593
52	463	660	225	48.6	225	4.00	1	0.00	1,697	8	0.5826
53	361	515	155	42.9	155	2.22	1	0.22	1,604	10	0.5787
54	722	1,030	380	52.6	380	2.68	1	0.32	2,789	7	0.4897
55	393	560	225	57.3	225	1.62	1	0.19	1,532	7	0.4087
	2,914	4,154	1,320	45.3	1,320	2.40	1	0.26	11,796	9	0.4495

Table 9. Forest Regular Deer Harvest 1985

PR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
56	905	1,310	320	35.4	320	2.33	1	0.22	4,590	14	0.9711
57	515	745	235	45.6	235	2.82	1	0.45	2,738	12	0.8278
58	155	225	50	32.2	50	7.00	1	2.00	680	14	0.3028
59	625	905	265	42.4	265	3.36	1	0.45	2,967	11	0.4999
60	290	420	90	31.0	90	89.98	1	0.00	1,445	16	0.3690
61	86	125	30	34.7	30	5.00	1	0.00	440	15	0.1447
62	114	165	25	21.9	25	4.00	1	0.00	495	20	0.1117
63	187	270	55	29.5	55	1.20	1	0.00	930	17	0.1874
64	86	125	40	46.3	40	6.00	1	1.00	287	7	0.0806
65	7	10	0	0.0	0	0.00	1	0.00	25	.	0.0038
66	79	115	15	18.9	15	15.00	1	0.00	255	17	0.0226
67	1,009	1,460	345	34.2	345	1.78	1	0.22	4,569	13	0.5267
68	480	695	225	46.9	225	1.18	1	0.47	2,274	10	0.5470
69	238	345	100	41.9	105	2.50	1	0.00	952	9	0.1229
70	10	15	0	0.0	0	0.00	1	0.00	15	.	0.0018
71	3	5	0	0.0	0	0.00	1	0.00	5	.	0.0003
73	7	10	5	72.4	5	5.00	1	0.00	25	5	0.0005
	4,798	6,943	1,800	37.5	1,805	2.48	1	0.32	22,692	13	0.1373

Table 10. Provincial White-tailed Deer Harvest Structure, 1983-85

1985 Hunting Year Ecozone	Number of Males	Number of Females	Number of Young	Harvest Ratio # Males	# Females	# Young
GRASSLAND	580	172	38	337	100	22
FARMLAND	661	342	113	193	100	33
PARKLAND	878	446	164	197	100	37
FOREST FRINGE	178	73	19	244	100	26
FOREST	236	99	30	238	100	30
NORTHERN SHIELD	—	—	—	—	100	—
PROVINCIAL TOTAL	2,533	1,132	364	224	100	32

1984 Hunting Year Ecozone	Number of Males	Number of Females	Number of Young	Harvest Ratio # Males	# Females	# Young
GRASSLAND	791	233	62	339	100	27
FARMLAND	1,207	627	176	193	100	28
PARKLAND	1,477	679	246	218	100	36
FOREST FRINGE	218	110	51	198	100	46
FOREST	547	362	165	151	100	46
NORTHERN SHIELD	—	—	—	—	100	—
PROVINCIAL TOTAL	4,240	2,011	700	211	100	35

1983 Hunting Year Ecozone	Number of Males	Number of Females	Number of Young	Harvest Ratio # Males	# Females	# Young
GRASSLAND	NO RAW DATA AVAILABLE			254	100	34
FARMLAND				225	100	33
PARKLAND				254	100	42
FOREST FRINGE				—	—	—
FOREST				237	100	46
NORTHERN SHIELD				—	—	—
PROVINCIAL TOTAL				237	100	34

- The highest fawn/doe harvest ratio occurred in the Parkland zones (35 fawns/100 does). Fewer fawns (22 fawns/100 does) were taken in the Grassland zones than in either 1983 or 1984. The shift in harvest towards bucks in both the Forest Fringe and Forest zones in 1985 resulted in a smaller fawn/doe harvest.

(b) Check Stations

- Check stations were again operated at Carlyle and Estevan (Table 11, Figure 2). Overall harvest structure was 115 bucks/100 does/49 fawns (n=599) compared to 219 bucks/100 does/57 fawns (1984; n=969) and 179 bucks/100 does/88 fawns (1984). The discrepancy between the check station sample and hunter questionnaire likely occurs because a signficant number of hunters report fawns as being yearling or mature animals on the questionnaire survey.
- As in previous years the age-class distribution of the harvest is heavily weighted towards mature bucks, with 40% of the harvest on the 2.5 and 3.5 year classes. Although harvest declined significantly in 1985, adult males still represent about 52% of the southeast deer harvest (check station datum) and 63% of the provincial harvest (hunter-questionnaire datum) but only 20% of the white-tailed deer population (Figure 3). Continued heavy harvest of males may result in sex-age specific harvest strategies in future years.
- Field dressed fawns from the check staions weighed an average of 61.6 lbs, similar to the long term average. A Duncan's multiple range test revealed no significant differences between zones with fawns ranging from 52 lbs. to 64 lbs.

Table 11. Age Structure of White-tailed Deer (by Year Class) Harvested in Southeast Saskatchewan from Check Station Samples (n=599), 1985

CROSSTAB OF SEX BY YEAR CLASS FROM 1985 WHITE-TAILED DEER CHECKSTATIONS

TABLE OF SEX BY YR_CLASS

SEX / YR_CLASS	0	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	99.9	TOTAL
FEMALE	0	63	33	72	51	20	12	5	5	9	7	20	297
	0.00	10.52	5.51	12.02	8.51	3.34	2.00	0.83	0.83	1.50	1.17	3.34	49.58
	0.00	21.21	11.11	24.24	17.17	6.73	4.04	1.68	1.68	3.03	2.36	6.73	
	0.00	58.88	34.74	53.33	53.68	51.28	57.14	100.00	100.00	100.00	87.50	25.32	
MALE	1	44	62	63	44	19	9	0	0	0	1	59	302
	0.17	7.35	10.35	10.52	7.35	3.17	1.50	0.00	0.00	0.00	0.17	9.85	50.42
	0.33	14.57	20.53	20.86	14.57	6.29	2.98	0.00	0.00	0.00	0.33	19.54	
	100.00	41.12	65.26	46.67	46.32	48.72	42.86	0.00	0.00	0.00	12.50	74.68	
TOTAL	1	107	95	135	95	39	21	5	5	9	8	79	599
	0.17	17.86	15.86	22.54	15.86	6.51	3.51	0.83	0.83	1.50	1.34	13.19	100.00

Figure 2 . Age Structure of White-tailed Deer Harvested in Southeast Saskatchewan 1985 (n=599)

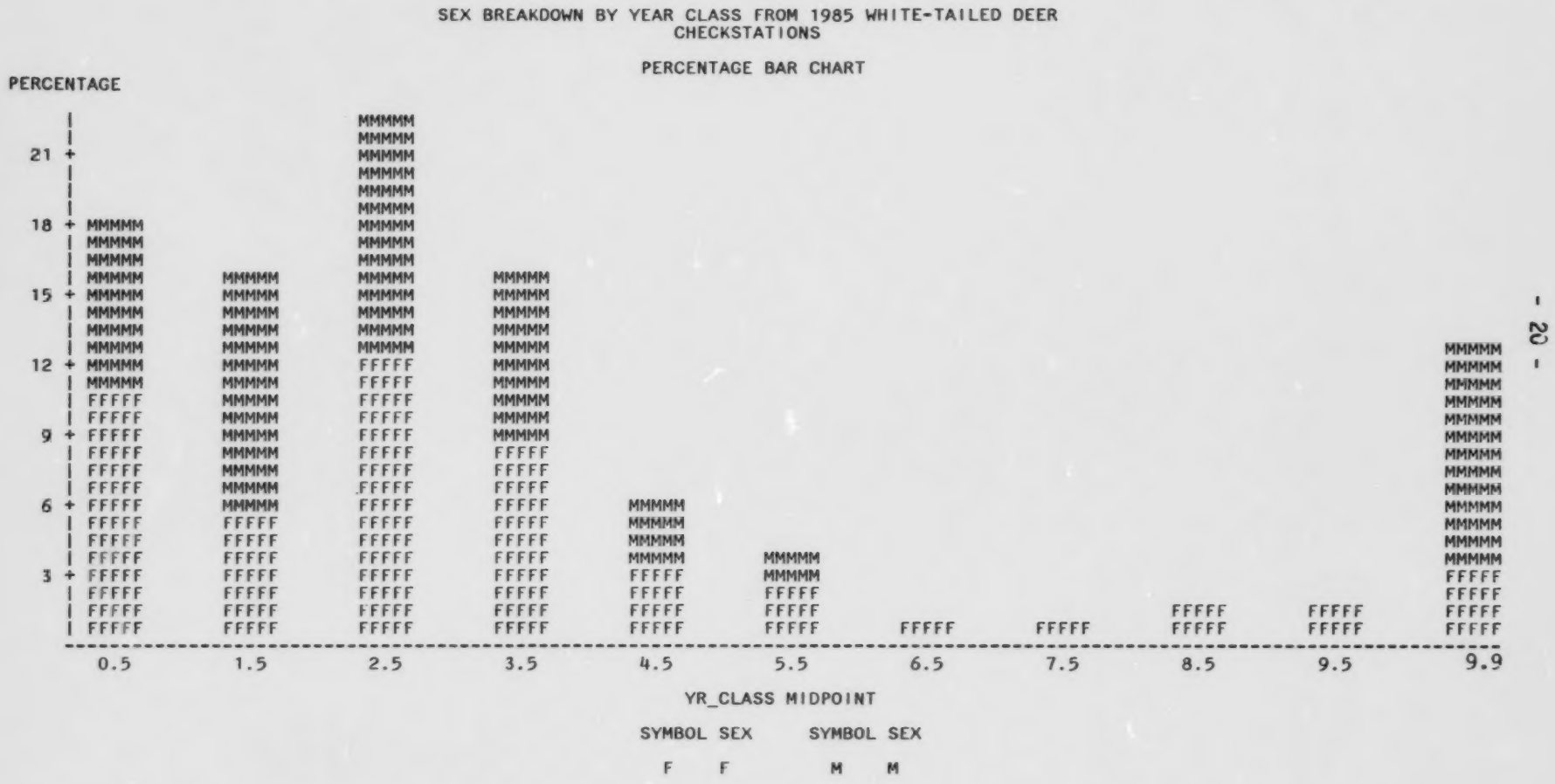
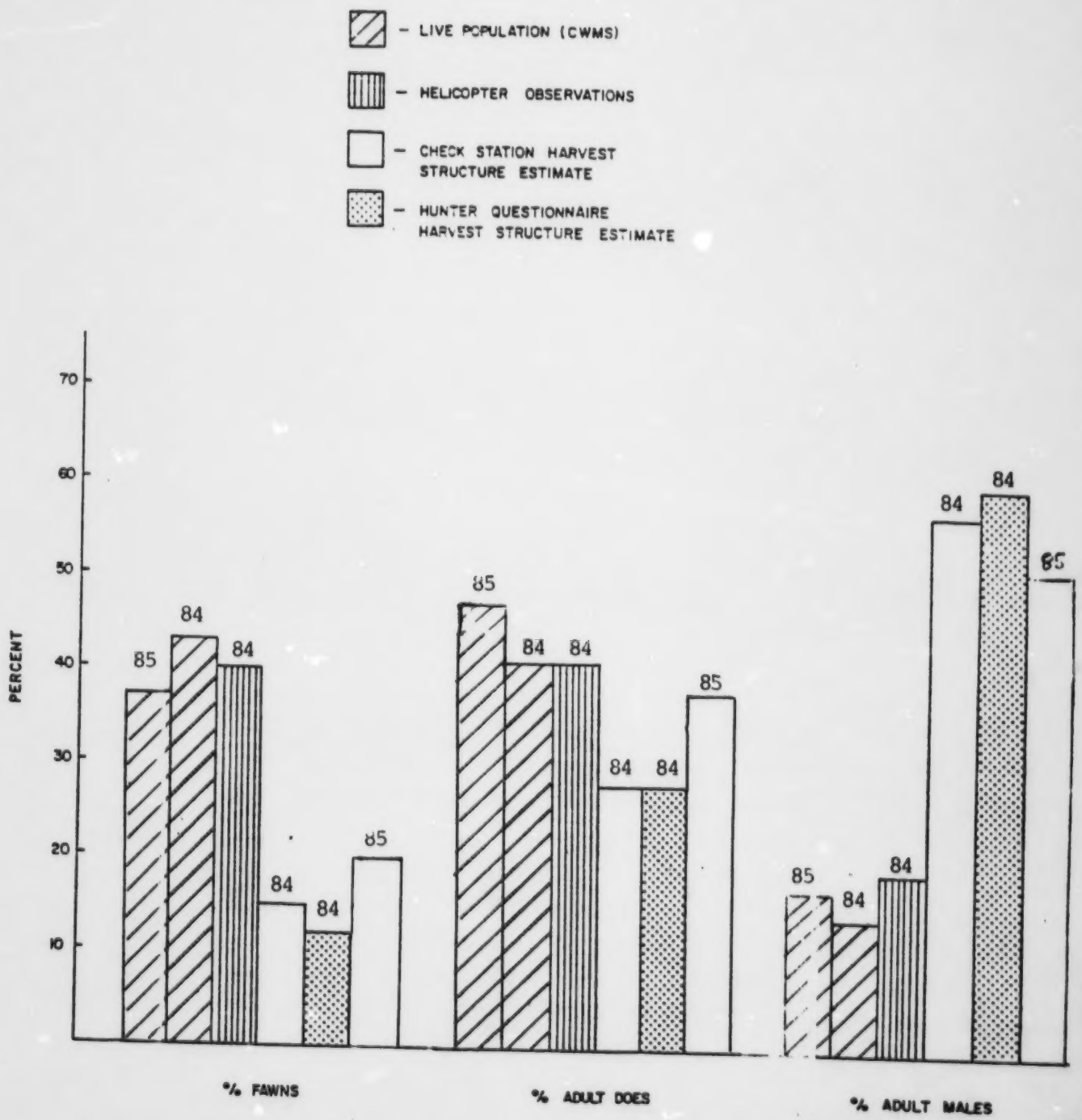


Fig. 3 SEX AND AGE STRUCTURE ESTIMATES OF THE WHITE-TAILED DEER POPULATION AND HARVEST, WMZ's 31-34, 1984 AND 1985



4. Archery

- Provincially, 1170 archery hunters harvested 167 deer for a success rate of 14% compared to 1241 hunters who harvested 341 deer for a success rate of 27% in 1984 (Tables 12 - 16).
- Archers required 66 hunter days/kill with 45% of the harvest occurring in the Grassland zones.
- Harvest structure was 212 bucks/100 does/38 fawns compared to 128 bucks/100 does/28 fawns in 1984.

5. Muzzleloader

- Provincially 509 muzzleloader hunters harvested 137 deer for a success rate of 27% compared to 644 active hunters who harvested 453 deer for a success rate of 70% in 1984 (Tables 17-21).
- Muzzleloaders required an average of 15 hunter days/kill compared with 66 days for archers and 8 days for regular white-tailed deer hunters.
- The Grassland zones received the heaviest harvest pressure accounting for 36 % of the kill.

6. Antlerless Season - WMZ 31 and 32 - December 2-7, 1985

- Due to poor participation during the 1984 antlerless season, hunters were allowed to purchase an antlerless white-tailed deer licence in addition to their regular deer licence in 1985. The antlerless licence however, was valid only in WMZ 31 and 32 during the December 2-7 season.
- Although only 419 additional licences were sold, 1,029 active hunters harvested 456 deer with a success rate of 44% (Table 22). The majority of the hunters used their regular licence to harvest an antlerless deer in the December 2-7 season because of the cold weather conditions during the regular November season.
- Harvest structure was 35 fawns/100 does with 43% of the harvest on 2.5 and 3.5 year class does (Figure 4).

Table 12. Grassland Deer Archery Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	22	30	3	12.4	3	2.70	1	0.00	168	63	0.0202
2	32	43	3	8.5	3	2.70	1	0.00	251	93	0.0236
4	18	24	5	30.3	5	1.00	1	0.00	189	35	0.0232
5	20	27	0	0.0	0	0.00	1	0.00	193	.	0.0323
6	18	24	0	0.0	0	0.00	1	0.00	136	.	0.0325
7	2	3	3	100.0	3	0.00	1	0.00	3	1	0.0014
8	4	5	0	0.0	0	0.00	1	0.00	11	.	0.0032
9	28	38	5	19.5	5	1.00	1	0.00	177	33	0.0514
10	46	62	8	17.8	8	2.00	1	0.00	228	28	0.0642
11	4	5	0	0.0	0	0.00	1	0.00	22	.	0.0219
12	26	35	11	41.9	11	1.00	1	0.00	142	13	0.4114
13	57	78	8	14.1	8	2.00	1	0.00	298	37	0.0729
14	109	148	30	27.3	30	1.50	1	0.25	669	23	0.1198
	384	523	75	19.7	75	1.45	1	0.09	2,484	33	0.0383

Table 13. Farmland Deer Archery Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FARMLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
15	11	13	0	0.0	0	0.00	1	0.00	80	.	0.0118
16	30	38	8	26.9	8	2.00	1	0.00	178	22	0.0335
17	19	24	5	27.9	5	5.39	1	0.00	123	23	0.0321
18	41	51	0	0.0	0	0.00	1	0.00	201	.	0.0270
19	24	30	8	34.2	8	1.00	1	1.00	132	16	0.0143
20	88	111	13	15.3	13	3.00	1	1.00	915	68	0.1654
21	30	38	0	0.0	0	0.00	1	0.00	150	.	0.0179
22	13	16	0	0.0	0	0.00	1	0.00	127	.	0.0268
23	54	67	8	15.1	8	5.39	1	2.70	402	50	0.0700
24	17	22	0	0.0	0	0.00	1	0.00	73	.	0.0151
25	11	13	5	50.2	5	1.00	1	0.00	43	8	0.0074
26	9	11	0	0.0	0	0.00	1	0.00	62	.	0.0140
27	4	5	0	0.0	0	0.00	1	0.00	46	.	0.0093
28	6	8	0	0.0	0	0.00	1	0.00	23	.	0.0169
29	58	73	5	9.3	5	2.70	1	2.70	490	91	0.0920
30	105	132	11	10.2	11	1.00	1	0.00	996	92	0.1374
	520	652	65	12.4	65	2.33	1	0.67	4,039	62	0.0445

Table 14. Parkland Deer Archery Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: PARKLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
31	24	30	5	22.3	5	5.39	1	0.00	129	24	0.0513
32	13	16	0	0.0	0	0.00	1	0.00	32	.	0.0116
33	9	11	0	0.0	0	0.00	1	0.00	31	.	0.0080
34	11	13	0	0.0	0	0.00	1	0.00	155	.	0.0288
36	2	3	0	0.0	0	0.00	1	0.00	5	.	0.0010
37	22	27	8	36.9	8	2.00	1	0.00	290	36	0.0256
38	2	3	0	0.0	0	0.00	1	0.00	8	.	0.0013
39	13	16	0	0.0	0	0.00	1	0.00	105	.	0.0138
41	18	22	3	15.4	3	0.00	1	0.00	131	49	0.0181
42	11	13	0	0.0	0	0.00	1	0.00	135	.	0.0182
43	4	5	0	0.0	0	0.00	1	0.00	22	.	0.0033
44	9	11	0	0.0	0	0.00	1	0.00	32	.	0.0071
45	22	27	0	0.0	0	0.00	1	0.00	123	.	0.0160
46	7	8	0	0.0	0	0.00	1	0.00	24	.	0.0041
47	7	8	0	0.0	0	0.00	1	0.00	22	.	0.0038
	173	213	16	9.3	16	2.00	1	0.00	1,244	77	0.012?

Table 15. Forest Fringe Deer Archery Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	2	3	0	0.0	0	0.00	1	0.00	8	.	0.0032
49	2	3	0	0.0	0	0.00	1	0.00	11	.	0.0045
50	4	5	0	0.0	0	0.00	1	0.00	16	.	0.0049
51	2	3	0	0.0	0	0.00	1	0.00	16	.	0.0057
52	2	3	0	0.0	0	0.00	1	0.00	5	.	0.0019
53	12	19	0	0.0	0	0.00	1	0.00	102	.	0.0370
54	21	32	3	12.7	3	2.70	1	0.00	140	52	0.0246
55	5	8	0	0.0	0	0.00	1	0.00	35	.	0.0093
	50	75	3	5.4	3	2.70	1	0.00	334	124	0.0127

Table 16. Forest Deer Archery Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
56	5	8	0	0.0	0	0.00	1	0.00	23	.	0.0048
57	5	8	0	0.0	0	0.00	1	0.00	28	.	0.0086
58	4	5	0	0.0	0	0.00	1	0.00	13	.	0.0060
59	5	8	0	0.0	0	0.00	1	0.00	40	.	0.0068
65	2	3	3	100.0	3	0.00	1	0.00	13	5	0.0021
66	2	3	0	0.0	0	0.00	1	0.00	11	.	0.0010
67	11	16	3	24.9	3	0.00	1	0.00	98	37	0.0113
68	5	8	0	0.0	0	0.00	1	0.00	43	.	0.0104
69	4	5	3	74.7	3	0.00	1	0.00	22	8	0.0028
	43	65	8	18.7	8	0.00	1	0.00	292	36	0.0018
Total Archery	1170	1528	167	-	167	-	-	-	8393	66	-

Table 17 . Grassland Deer Muzzleloader Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST MUZZLELOADER LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	7	8	3	39.3	3	2.64	1	0.00	24	9	0.0029
2	18	21	8	44.3	8	7.91	1	0.00	44	6	0.0041
4	11	13	3	23.6	3	2.64	1	0.00	29	11	0.0036
5	4	5	0	0.0	0	0.00	1	0.00	11	.	0.0018
6	25	29	0	0.0	0	0.00	1	0.00	102	.	0.0242
8	7	8	3	39.3	3	0.00	1	2.64	28	11	0.0082
9	2	3	0	0.0	0	0.00	1	0.00	4	.	0.0012
10	9	11	3	29.5	3	0.00	1	2.64	16	6	0.0045
11	4	5	3	59.0	3	2.64	1	0.00	11	4	0.0107
12	7	8	0	0.0	0	0.00	1	0.00	16	.	0.0460
13	22	26	8	35.4	8	5.27	1	2.64	78	10	0.0191
14	38	45	21	55.6	21	5.00	1	2.00	102	5	0.0182
	154	182	50	32.5	50	13.00	1	5.00	462	9	0.0071

Table 18. Farmland Deer Muzzleloader Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FARMLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST MUZZLELOADER LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
15	2	3	3	100.0	3	2.64	1	0.00	8	3	0.0012
16	2	3	3	100.0	3	2.64	1	0.00	8	3	0.0015
17	2	3	0	0.0	0	0.00	1	0.00	5	.	0.0014
18	12	16	3	21.8	3	0.00	1	0.00	33	13	0.0044
19	12	16	0	0.0	0	0.00	1	0.00	46	.	0.0050
20	42	55	11	24.9	11	7.91	1	2.64	152	14	0.0274
21	8	11	0	0.0	0	0.00	1	0.00	40	.	0.0047
22	6	8	0	0.0	0	0.00	1	0.00	8	.	0.0017
23	16	21	3	16.3	3	0.00	1	0.00	70	27	0.0122
24	8	11	3	32.6	3	0.00	1	2.64	38	15	0.0079
25	2	3	0	0.0	0	0.00	1	0.00	8	.	0.0014
27	8	11	0	0.0	0	0.00	1	0.00	26	.	0.0054
28	10	13	0	0.0	0	0.00	1	0.00	61	.	0.0448
29	18	24	13	72.5	13	3.00	1	1.00	87	7	0.0163
30	42	55	11	24.9	11	0.50	1	0.50	136	13	0.0187
	192	251	47	24.7	47	1.80	1	0.80	725	15	0.0080

Table 19. Parkland Deer Muzzleloader Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: PARKLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST MUZZLELOADER LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
31	4	5	5	100.0	5	5.27	1	0.00	12	2	0.0047
32	10	13	0	0.0	0	0.00	1	0.00	29	.	0.0104
33	10	13	3	27.4	3	0.00	1	0.00	24	9	0.0061
34	2	3	0	0.0	0	0.00	1	0.00	3	.	0.0005
35	23	32	0	0.0	0	0.00	1	0.00	133	.	0.0510
36	4	5	0	0.0	0	0.00	1	0.00	20	.	0.0038
37	15	21	3	17.1	3	0.00	1	0.00	65	25	0.0057
38	6	8	0	0.0	0	0.00	1	0.00	49	.	0.0076
40	2	3	0	0.0	0	0.00	1	0.00	21	.	0.0039
41	4	5	3	68.6	3	0.00	1	2.64	18	7	0.0026
42	2	3	0	0.0	0	0.00	1	0.00	11	.	0.0014
43	4	5	3	68.6	3	2.64	1	0.00	26	10	0.0040
44	19	26	5	27.4	5	0.00	1	0.00	94	18	0.0205
45	8	11	3	34.3	3	2.64	1	0.00	16	6	0.0021
46	8	11	0	0.0	0	0.00	1	0.00	58	.	0.0097
	119	164	24	19.9	24	1.00	1	0.25	578	24	0.0059

Table 20. Forest Fringe Deer Muzzleloader Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST MUZZLELOADER LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
49	2	3	3	100.0	3	0.00	1	0.00	1	1	0.0006
50	4	5	0	0.0	0	0.00	1	0.00	13	.	0.0040
51	7	8	3	40.3	3	2.64	1	0.00	37	14	0.0129
52	13	16	5	40.3	5	5.27	1	0.00	55	11	0.0190
53	2	3	0	0.0	0	0.00	1	0.00	12	.	0.0043
54	2	3	0	0.0	0	0.00	1	0.00	5	.	0.0009
55	4	5	3	60.4	3	2.64	1	0.00	16	6	0.0042
	35	42	13	37.8	13	4.00	1	0.00	140	11	0.0053

Table 21. Forest Deer Muzzleloader Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST MUZZLELOADER LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
57	3	5	0	0.0	0	0.00	1	0.00	18	.	0.0056
59	3	5	0	0.0	0	0.00	1	0.00	5	.	0.0009
68	1	3	0	0.0	0	0.00	1	0.00	8	.	0.0019
69	1	3	3	100.0	3	0.00	1	0.00	5	2	0.0007
	9	16	3	30.2	3	0.00	1	0.00	37	14	0.0002
Total Muzzleloader	509	605	137	—	137	—	—	—	1942	15	—

Table 22. Parkland Antlerless Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

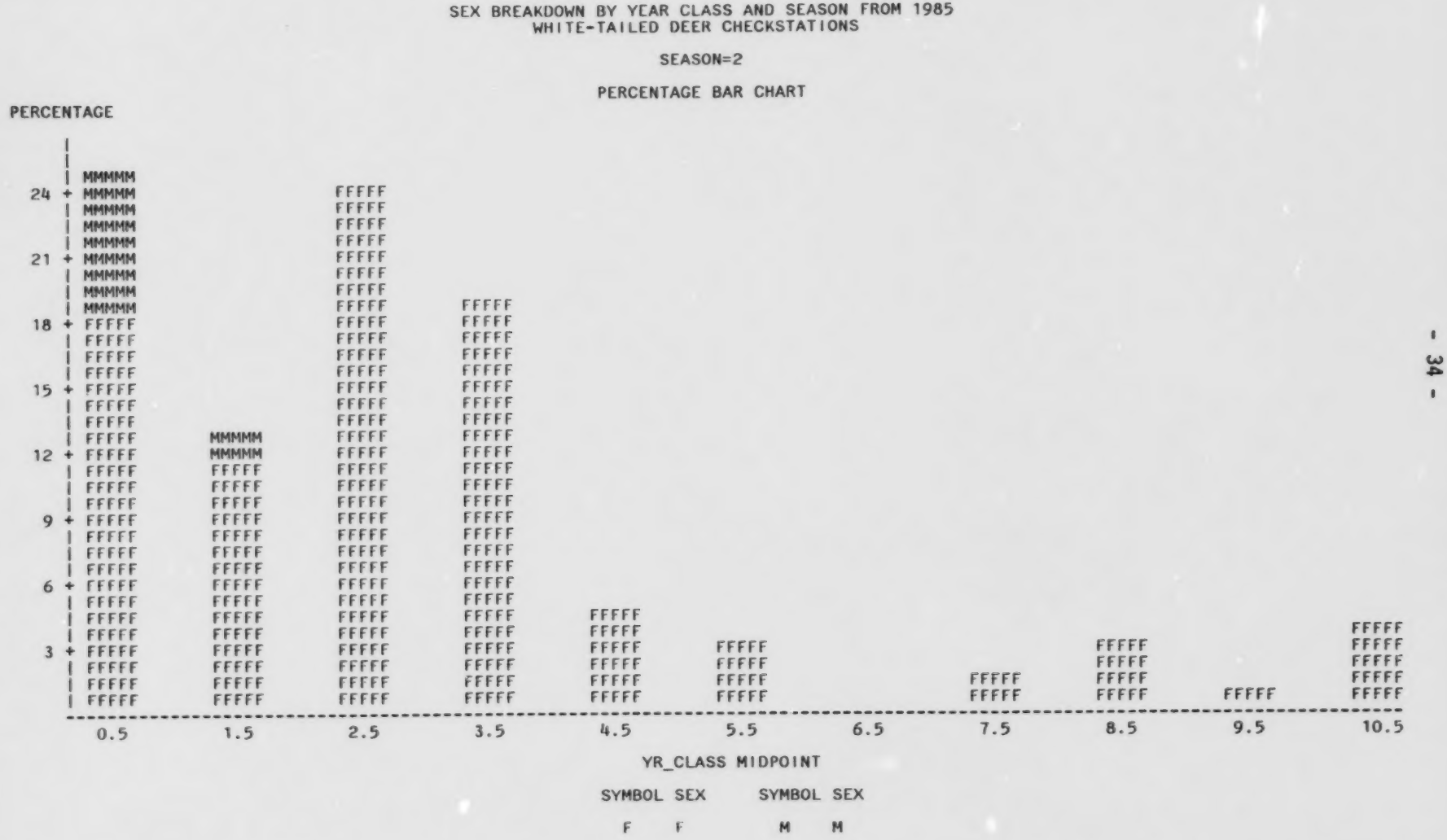
ECOLOGICAL DIVISION: PARKLAND

SPECIES: WHITE TAIL DEER

TYPE OF LICENSE: 1ST ANTLERLESS LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
31	439	479	219	50.0	219	0.00	1	0.26	653	3	0.2590
32	590	644	237	40.2	237	0.03	1	0.44	888	4	0.3183
	1,029	1,123	456	44.3	456	0.01	1	0.35	1,541	3	0.2901

Figure 4 . Age Structure of Antlerless White-tailed Deer Harvest in WMZ 31 & 32, 1985



B. POPULATION STATUS

1. Density: Quadrat Surveys

- Although delayed until February due to poor snow and visibility conditions the quadrat survey effort produced reliable estimates with ±20% confidence intervals for all survey blocks (Table 23).
- The general trend in 1985-86 was for lower population estimates in southeastern Saskatchewan and status quo for the rest of the province.
- From quadrat survey information it is evident that populations in southeastern Saskatchewan have been declining steadily since 1983. The Wroxton (WMZ 37), Parkerview (WMZ 39), Moosomin (WMZ 34), Parkman (WMZ 34) and Alida (WMZ 32) declined 30%, 38%, 33%, 18%, and 35% from 1984-85 with a similar decline from the 1982-83 estimates.
- After the mild winters of 1982-83 and 1983-84 it is apparent that the severe 1984-85 winter had a major impact on the southeast whitetail population with winter mortality in the 30% to 40% range. The massive feeding effort during that winter met its prime objective to assist part of the deer population and reduce depredation but it is recognized that feeding did not save the young age classes or groups of deer in isolated habitat where they could not be fed easily.
- It is also hypothesized that the southeast deer herd in WMZ 32 and 34 may have been higher than the existing habitat was capable of supporting as a result of the 1982-83 and 1983-84 mild winters. With habitat becoming a critical factor in these zones it is highly probable that winter mortality is now the major limiting factor governing population growth and that populations will not recover to their former levels unless preceded by several mild winters.
- In WMZ 37, 38 and 39 the presence of unfilled habitat suggests that only winter mortality played a major role in the population reduction. The bucks-only strategy, designed to protect the breeding cohort was effective up until the severe 1984-85 winter. The feeding effort was minimal in these zones and did not have a major impact on deer survival.

Table 23. White-tailed Deer Stratified Random Block Aerial Surveys, 1986

Survey Block	Survey Area (km^2)	WMZ	WMZ Area (km^2)	Block Pop. Est. ±80%CI	Block Pop. Density ±80%CI (Deer/km^2)	Previous Pop. Est. (Year)
Sask. River	4994	13 & 14	9664	—	—	2494 ± 474 (85)
Last Mtn. Lake	379	21	2437	—	—	599 ± 177 (85)
Dundurn	1480	22 & 30	11983	—	—	1175 ± 185 (85)
Souris	3149	31 & 32	5312	—	—	4051 ± 782 (85)
Alida	1492	32	2790	1874 ± 214	1.3 ± 0.1	2892 ± 707 (85)
Moose Mtn.	681	33	3883	1122 ± 166	1.6 ± 0.2	1118 ± 368 (85)
Parkman	1865	34	5386	1729 ± 241	0.9 ± 0.1	2107 ± 387 (85)
Moosomin	932	34	5386	648 ± 88	0.7 ± 0.1	974 ± 285 (85)
Melville	5885	37	11315	—	—	1988 ± 205 (85)
Wroxton	1176	37	11315	985 ± 185	0.8 ± 0.2	1413 ± 295 (85)
Parkerview	1678	39	1603	1388 ± 230	0.8 ± 0.1	2227 ± 307 (85)
Pleasantdale	2949	41 & 42	14625	1094 ± 229	0.4 ± 0.1	963 ± 117 (85)
Manitou	2129	46	5959	—	—	2392 ± 415 (85)

- In WMZ 41 and 42 the Pleasantdale survey increased 14% suggesting that Parkland deer populations in central Saskatchewan are maintaining status quo or increasing slightly.
- New quadrat surveys in WMZ 6 provided baseline data on southwest deer populations (Table 24). The Maple Creek and Eastend (Frenchman River) survey blocks produced estimates of 619 ± 58 (0.45 ± 0.04 deer/km^2) and 827 ± 119 (0.99 ± 0.14 deer/km^2). Based on the available habitat it is estimated that the 1985-86 winter population in WMZ 2 and 6 is 11,800 deer and 5,200 deer, respectively. Field reports and landowner comments suggest that deer populations in southwestern Saskatchewan have improved steadily since 1983 and that a more liberal hunting season is warranted.
- The Moose Mountain Park survey indicated a static white-tailed deer population. However, since this survey is designed specifically for moose and the majority of the deer utilize the perimeter of the Park, the deer estimate is not representative of WMZ 33.

2. Population Structure: Cooperative Wildlife Observations

- In 1985, 13,320 deer were classified compared to 18,241 in 1984 and 13,754 in 1983 (Tables 25-30). Many cooperators reported that low deer densities particularily in the southeast Parkland zones contributed to the lower sample size.
- Productivity estimates in all ecological zones were lower than either 1983 or 1984 with buck/doe ratios remaining relatively static. Fawn/100 female ratios declined from 99 (1983), 97 (1984) to 81 (1985) as an increasing number of does were observed without fawns.
- The Farmland zones produced the highest fawn/doe ratio at 87 fawns/100 females compared to 94 fawns/100 females in 1984. In 1984 the Parkland zones produced the highest fawn/doe ratio with 104 fawns/100 females but this ratio declined significantly to 82 fawns/100 females in 1985.

Table 24 1985-86 Southwest Drainage White-tailed Deer Population Surveys Using The Stratified Random Block Sampling technique

Survey Block	Survey Area (km^2)	WMZ	Block Pop. Est ± 80% CI	Block Pop. Density ± 80% CI (Deer/km^2)	1985 Zone Harvest Population
					(Val Marie)
Maple Creek	834	6	619 ± 58	0.45 ± 0.04	0.51 ± 0.60 (83-84)*
					(Eastend)
Eastend	1370	6	827 ± 119	0.99 ± 0.14	0.43 ± 0.45 (83-84)*

*Represents density data (deer/km^2) from a 922 km^2 (Eastend) + 1658 km^2 (Val Marie) survey block flown with a helicopter in 1983-84.
Due to the low number of sample blocks flown, results (deer/km^2) should not be interpreted as conclusive.

Table 25. White-tailed Deer Population Structure - Provincial Sept-Nov 1985
(Co-operative Wildlife Management Study)

Ecological Zone	NUMBER OF DEER: Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (N)	Males * / 100 Females	Fawns / 100 Females	% Does with Fawns: Single	Twins	Triplets	% Does Without Fawns
GRASSLAND	167 (46)	197 (54)	1105	867	= 2336	33	78	56	40	4	47
FARMLAND	199 (38)	325 (62)	1542	1346	= 3412	35	87	59	37	4	40
PARKLAND	351 (33)	703 (67)	2354	1914	= 5322	45	82	59	39	2	43
FRINGE	63 (34)	125 (66)	424	351	= 963	44	83	57	42	1	43
FOREST	119 (44)	151 (56)	600	417	= 1287	46	69	57	42	0	51
TOTAL	921 (38)	1514 (62)	6127	4986	= 13320	40	81	58	39	3	44

* Males/100 Females = Yearling Males + Mature Males + Unclassified Males/Total Females

Table 26. White-tailed Deer Population Structure - Grassland Sept-Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF DEER Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)	Males * / 100 Females	Fawns / 100 Females	% Does with Fawns Single	Twins	Triplets
1	15 (38)	25 (63)	143	96	= 279	30	67	69	31	0
2	21 (47)	24 (53)	139	141	= 325	34	101	54	45	1
3	0 (—)	0 (—)	3	4	= 7	0	133	—	—	—
4	35 (45)	43 (55)	288	177	= 543	27	61	58	35	7
5	10 (40)	15 (60)	72	58	= 155	36	81	52	45	3
6	24 (44)	31 (56)	97	87	= 239	57	90	40	45	15
7	6 (27)	16 (73)	83	67	= 172	27	81	57	43	0
8	10 (77)	3 (23)	36	30	= 79	36	83	57	43	0
9	4 (80)	1 (20)	49	26	= 80	12	53	85	15	0
10	8 (40)	12 (60)	43	37	= 100	47	86	71	29	0
11	0 (—)	1 (100)	13	15	= 29	8	115	50	50	0
12	1 (33)	2 (67)	11	12	= 26	27	109	57	43	0
13	20 (67)	10 (33)	60	51	= 141	50	85	44	48	7
14	13 (48)	14 (52)	68	66	= 161	40	97	48	52	0
TOTAL	167 (46)	197 (54)	1105	867	= 2336	33	78	56	40	4

* Males/100 Females = Yearling Males + Mature Males + Unclassified Males/Total Females

Table 27. White-tailed Deer Population Structure - Farmland Sept-Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF DEER: Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)	Males * / 100 Females	Fawns / 100 Females	% Does with Fawns: Single	Twins	Triplets
15	37 (47)	42 (53)	319	331	= 729	25	104	55	40	5
16	11 (38)	18 (62)	85	72	= 186	35	85	50	50	0
17	14 (52)	13 (48)	96	76	= 199	31	79	66	32	2
18	8 (73)	3 (27)	39	20	= 70	28	51	60	40	0
19	35 (49)	36 (51)	145	101	= 317	48	70	66	26	8
20	12 (18)	55 (82)	104	77	= 248	66	74	75	25	0
21	16 (30)	38 (70)	154	153	= 361	35	99	52	42	6
22	0 (0)	2 (100)	1	0	= 3	2	0	0	0	0
23	43 (36)	75 (64)	443	409	= 970	27	92	64	33	3
24	4 (50)	4 (50)	13	7	= 28	62	54	50	50	0
25	1 (100)	0 (0)	6	5	= 12	33	83	25	75	0
26	1 (33)	2 (67)	19	17	= 39	21	89	64	36	0
27	1 (50)	1 (50)	12	5	= 19	25	42	100	0	0
28	3 (33)	6 (67)	17	16	= 42	53	94	50	42	8
29	6 (24)	19 (76)	63	37	= 125	40	59	64	32	5
30	7 (39)	11 (61)	26	20	= 64	69	77	36	55	9
TOTAL	199 (38)	325 (62)	1542	1340	= 3412	35	87	59	37	4

* Males/100 Females = Yearling Males + Mature Males + Unclassified Males/Total Females

Table 28. White-tailed Deer Population Structure - Parkland Sept-Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF DEER: Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)	Males * / 100 Females	Fawns / 100 Females	% Does with Fawns: Single	Twins	Triplets
31	30 (59)	21 (41)	195	192	= 438	24	98	52	43	4
32	16 (26)	45 (74)	167	160	= 388	37	96	58	41	1
33	19 (33)	38 (67)	167	119	= 343	34	71	75	25	0
34	63 (39)	99 (61)	390	280	= 832	42	72	72	27	1
35	22 (21)	82 (79)	158	116	= 378	66	73	57	42	1
36	2 (22)	7 (78)	29	19	= 57	34	66	54	46	0
37	82 (39)	127 (61)	498	405	=1112	42	81	54	43	3
38	10 (29)	24 (71)	59	32	= 125	58	54	61	39	0
39	20 (22)	72 (78)	181	167	= 440	57	92	37	58	5
40	20 (45)	24 (55)	62	60	= 166	71	97	64	36	0
41	3 (18)	14 (82)	30	30	= 77	50	100	45	50	5
42	16 (27)	43 (73)	90	57	= 206	66	63	71	29	0
43	14 (56)	11 (44)	51	47	= 123	49	92	52	48	0
44	2 (40)	3 (60)	6	1	= 12	67	17	63	38	0
45	14 (19)	61 (81)	166	138	= 379	46	83	59	41	0
46	7 (35)	13 (65)	27	19	= 66	74	70	67	17	17
47	11 (37)	19 (63)	78	72	= 180	40	92	56	44	0
TOTAL	351 (33)	703 (67)	2354	1924	=5322	45	82	59	39	2

* Males/100 Females = Yearling Males + Mature Males + Unclassified Males/Total Females

Table 29. White-tailed Deer Population Structure - Fringe Sept-Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF DEER					Males * / 100 Females	Fawns / 100 Females	% Does with Fawns		
	Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)			Single	Twins	Triplets
48	7 (23)	23 (77)	60	66	= 156	50	110	33	67	0
49	8 (53)	7 (47)	23	21	= 59	70	91	64	36	0
50	13 (31)	29 (69)	70	57	= 169	60	81	74	24	3
51	1 (7)	14 (93)	39	33	= 87	38	85	50	50	0
52	5 (42)	7 (58)	24	18	= 54	50	75	79	21	0
53	7 (23)	23 (77)	93	65	= 188	29	70	63	35	2
54	17 (59)	12 (41)	81	54	= 164	36	67	49	49	3
55	5 (33)	10 (67)	34	37	= 86	47	109	56	44	0
TOTAL	63 (34)	125 (66)	424	351	= 963	44	83	57	42	1

Table 30. White-tailed Deer Population Structure - Forest Sept-Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF DEER Yearling Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)	Males * / 100 Females	Fawns / 100 Females	% Does with Fawns Single	Twins	Triplets
56	12 (29)	30 (71)	119	98	= 259	35	82	63	37	0
57	26 (53)	23 (47)	82	60	= 191	60	73	46	51	3
58	7 (54)	6 (46)	31	18	= 62	42	58	55	45	0
59	7 (37)	12 (63)	54	48	= 121	35	89	39	61	0
60	11 (58)	8 (42)	57	27	= 103	37	47	60	40	0
61	1 (25)	3 (75)	7	3	= 14	57	43	50	50	0
62	5 (45)	6 (55)	17	7	= 35	65	41	71	29	0
63	14 (42)	19 (58)	58	39	= 130	64	67	62	38	0
64	7 (39)	11 (61)	28	25	= 71	64	89	56	44	0
65	0 (—)	0 (—)	1	0	= 1	0	0	0	0	0
66	17 (49)	18 (51)	66	31	= 132	53	47	52	48	0
67	5 (50)	5 (50)	36	23	= 69	33	64	72	28	0
68	1 (14)	6 (86)	10	14	= 31	70	140	50	50	0
69	4 (50)	4 (50)	23	20	= 51	35	87	75	25	0
70	0 (—)	0 (—)	1	0	= 1	0	0	0	0	0
71	1 (100)	0 (—)	8	3	= 12	13	38	100	0	0
72	0 (—)	0 (—)	1	0	= 1	0	0	0	0	0
73	1 (100)	0 (—)	1	1	= 3	2	1	100	0	0
COMMERCIAL FOREST	119 (44)	151 (56)	600	417	= 1287	46	69	57	42	0
SPECIES TOTAL	921 (38)	1514 (62)	6127	4986	= 13320	40	81	58	39	3

* Males/100 Females = Yearling Males + Mature Males + Unclassified Males/Total Females

- The Grassland, Forest Fringe, and Forest zones had the lowest fawn/doe ratios with 78 fawns/100 females, 83 fawns/100 females and 69 fawns/100 females compared with 94, 99 and 85 fawns/100 females in 1984, respectively.
- Buck/100 does ratios were lower in the Grassland and Farmland zones than any of the other ecological regions.

3. Impact of the 1985-86 Winter

- Compared to the 1984-85 severe winter this past winter was one of the mildest on record throughout the entire province.
- With the exception of an extremely cold November, temperatures exceeded the average province-wide and most of southern Saskatchewan had minimal snow cover. In January 1986 most WMZ's in southern Saskatchewan lost 80% of their snow cover as a result of melting temperatures.
- In WMZ 2 and 6, early November and February snow cover caused deer to utilize nearby haystacks resulting in the only major deer depredation problem in the province during the 1985-86 winter.
- Production in 1986 is expected to be excellent throughout all of Saskatchewan.

4. Impact of 1984 and 1985 Drought

- During the summers of 1984 and 1985 southern Saskatchewan, particularly in the Grassland zones, experienced one of the worst droughts in history.
- Cooperative Wildlife study fawn/doe ratios for the Grassland zones were significantly lower than either the Farmland or Parkland zones.
- This situation changed dramatically in the summer of 1986 as a result of extensive rainfall throughout southern Saskatchewan. It is expected that reproductive output has improved in 1986 but remains below the long term average.

5. Management Problems

(a) Declining winter populations in the southeast Parkland and Farmland zones suggest that the the severe 1984-85 winter resulted in excessive winter mortality and low reproductive output in 1985. Although these zones support the highest density population in the province and the 1985 harvest was the lowest on record, there is concern that a continued population decline may significantly impact whitetail hunting in Saskatchewan.

(b) WMZ 32 and 34 continue to experience excessive loss of critical deer habitat and may not be able to sustain high densities of deer in the future. Severe winters may play an even greater role in limiting population growth as a result of this habitat loss.

(c) In WMZ 37, 38 and 39 severe winter mortality in 1984-85 was responsible for a significant population reduction. The large amount of under-utilized deer habitat in these zones and excellent production anticipated in 1986 should improve the situation dramatically.

(d) Deer populations in the Forest Fringe and Forest zones remain stable following the severe 1984-85 winter, but are expected to improve dramatically as a result of the mild 1985-86 winter and anticipated excellent production in 1986.

C. **1986 MANAGEMENT OBJECTIVES**

1. With declining populations in southeast Saskatchewan the season will remain 2 weeks in length but hunting in WMZ 16, 17, 31 to 34, 37 to 39 will be restricted to Saskatchewan Residents only. Consideration was given to a delayed one week season in these zones but it was felt hunting pressure could be reduced more effectively through a hunter information program.

2. The season in the Grassland and some Farmland zones (WMZ 1-14, 24-26) will be extended to 2 weeks in response to steadily improving populations and as a management strategy to take some hunting pressure off the southeast Parkland zones.

3. The special anterless hunting season in WMZ 31 and 32 will be eliminated for 1986 in view of declining populations. However, production is expected to be excellent in 1986 and antlerless seasons may be used as a management tool to harvest specific segments of the population in future years.

4. Due to cold November weather and high mortality during the 1984-85 winter the impact of a more liberal hunting regime (one week bucks-only and one week either-sex) in WMZ 37 could not be adequately assessed. Season dates and structure will remain the same in 1986 in order to determine hunter response and the impact of this type of season on hunter success and harvest rates.

5. An antlerless season will be introduced for WMZ 2 and 6 in response to improved populations in southwest Saskatchewan. Since the majority of the regular white-tailed deer harvest in these zones is on adult bucks (6 bucks/doe) a sex-age specific harvest to stabilize the population structure is warranted. The objective is to slow population growth so as to prevent the population from expanding beyond levels tolerable to landowners or levels that are not manageable under our present hunting regime. To allow some control on both hunter participation and harvest only the regular mule deer licence holders (Regular and Antlerless Mule Deer, WMZ 2 and 6) will be allowed to purchase an additional licence and harvest an antlerless white-tailed deer while they are hunting their other draw species. With current winter populations plus the 1986 recruitment it is estimated that the 1986 antlerless and regular either-sex harvest will not exceed 25% of the prehunt population, a level acceptable for continued population growth but at a slower rate.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 WHITE-TAILED DEER HUNTING REGULATIONS.

MOOSE

A. REVIEW OF 1985 HUNTING SEASON

1. Licence Sales

	1978	1979	1980	1981	1982	1983*	1984*	1985*
Special	3,249	3,616	2,355	2,400	2,034	1,967	1,898	2,105
Regular	8,856	10,230	11,077	10,542	10,212	7,894	8,006	8,125
Archery						29	41	38
Guided	394	355	284	289	282	212	194	239
TOTAL	12,499	14,201	13,716	13,232	12,527	10,073	10,165	10,507

* Final (June 1) sales figures: however all data analysis based on figures available in March and projected to June 1.

2. Hunting Activity and Harvest

(a) Provincial

- With extremely cold weather during the late moose season, field reports originally suggested that hunting activity had declined during the 1985 hunting season.
- The hunter questionnaire survey, however, indicated that on a provincial scale active hunters increased from 8,821 (1984) to 9,504 (1985) but because of cold weather conditions success rates declined from 37% to 22% with a corresponding 35% reduction in harvest from 3,223 to 2,068 moose (Table 31, Figures 5 and 6). Hunter-days of recreation increased 22% from 35,364 to 42,859 days in response to lower success rates, requiring twice as many days to harvest a moose.
- Hunting activity during the early season remained similar to 1984 but success rates declined slightly.
- For the commercial forest zones the majority of the hunting activity and harvest occurs during the late special and regular seasons.

Table 31. Provincial Moose Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

FOR THE 1985 HUNTING YEAR

SUMMARY TOTALS FOR SPECIES: MOOSE

EZONE	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
GRASS	0	0	0	0.0	0	0.00	1	0.00	0	.	.
FARM	0	0	0	0.0	0	0.00	1	0.00	0	.	.
PARK	135	184	28	20.3	28	1.66	1	0.80	634	23	0.0353
FRINGE	957	1,160	258	26.9	258	1.89	1	1.59	4,678	18	0.3165
FOREST	8,365	9,356	1,768	21.1	1,768	4.75	1	2.29	37,591	21	0.2274
SHIELD	47	65	15	32.1	15	0.00	1	15.03	306	20	0.0017
TOTAL	9,504	10,765	2,069	21.8	2,069	4.09	1	2.16	43,208	21	0.1138

Figure 5. Provincial Moose Harvest Statistics - 1958-1985

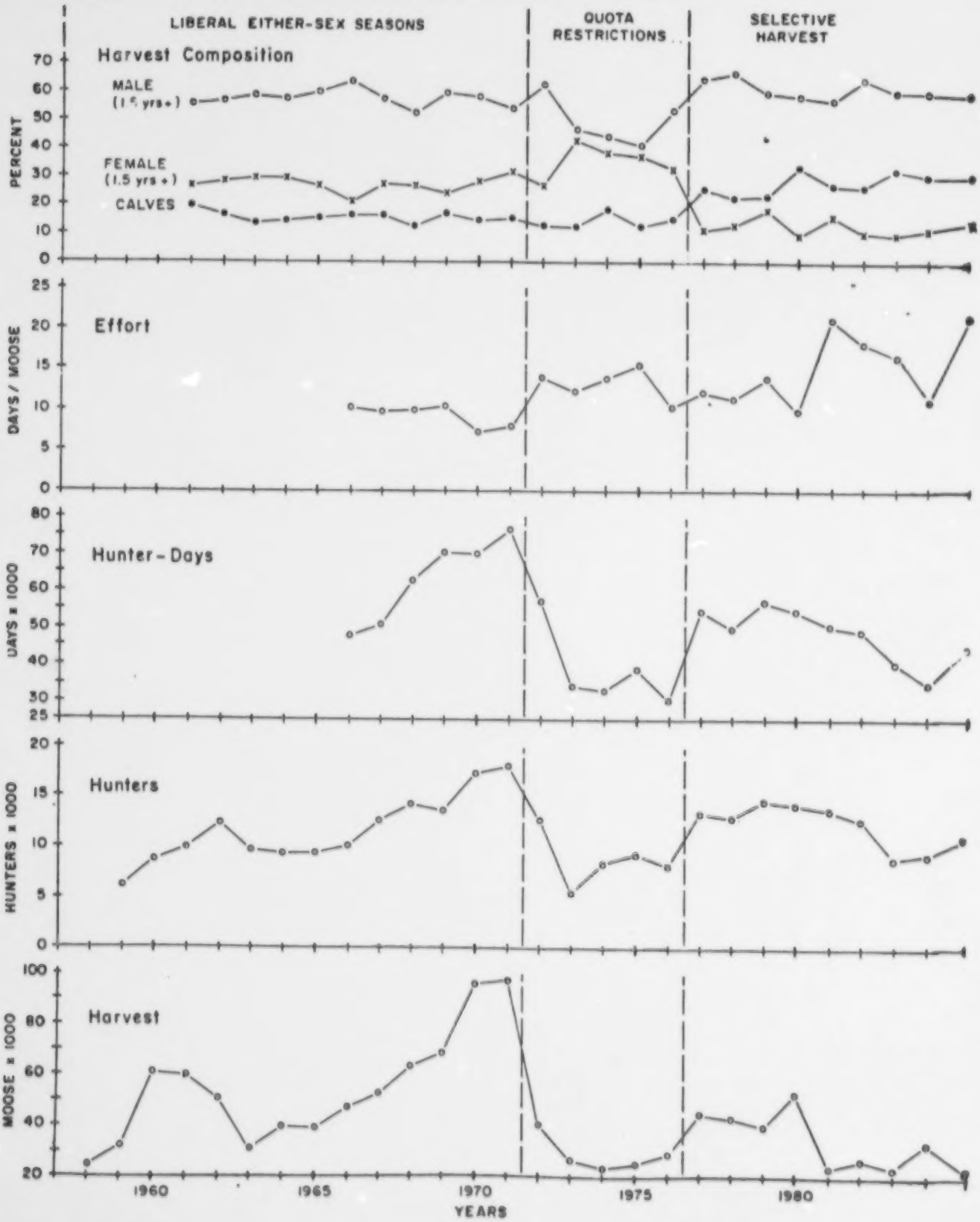
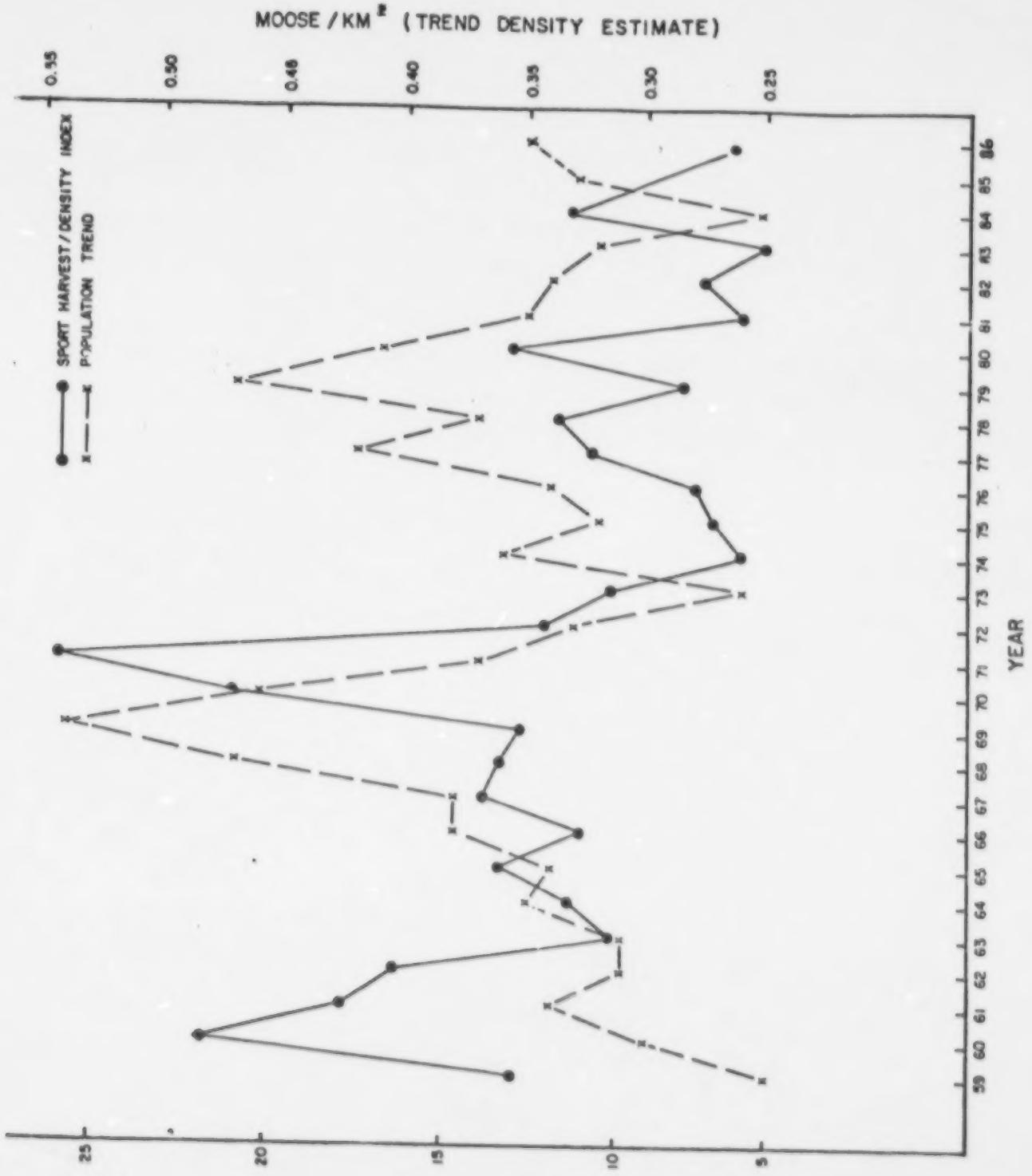


Figure 6. Moose Transect Population Estimate and Harvest Index Trends 1959-86.

INDEX OF HARVEST PRESSURE $\left(\frac{\text{MOOSE SPORT HARVEST}}{\text{TREND DENSITY ESTIMATE}} \div 1000\right)$



(b) Northern Commercial Forest

- For the northern special seasons, 1,825 active hunters harvested 612 moose, a 20% decline from 1984, but with the lower success rate, hunter-days increased from 5,704 (1984) to 8,401 (1985) (Table 32). In the northern regular bull-calf seasons active hunters increased slightly from 7,141 (1984) to 7,447 (1985) but harvest declined 40% from 2,371 to 1,413 moose (Tables 33-35).
- Despite hunter recreation increasing from 28,775 to 33,710 days, success rates remained low and contributed to one of the lowest sport harvests on record.
- The sex and age information reported on hunter questionnaires resulted in a harvest estimate of 56% bulls, 14% cows, and 30% calves compared to 60% bulls, 11% cows and 29% calves in 1984 (Table 36).
- The check station sample was 44% mature bulls, 13% mature cows, 22% yearlings and 21% calves (Tables 37, Figure 7). The mean age of bulls (4.2) and cows (5.8) did not change appreciably from 1984 (Table 38, Figure 8).

(c) Southern Zones

i. Moose Mountain Park (WMZ 33) and Cypress Hills (WMZ 7):
No hunting seasons in 1985.

ii. Thickwood Hills (WMZ 54):
No hunting season in 1985.

iii. Fort a la Corne WMU (WMZ 50):
The quota of 100 licences provided 566 hunter-days recreation for 97 hunters with a harvest of 23 moose, a decline of 54% from 1984 (Table 39).

iv. Duck Mountain Park (WMZ 37):
The quota of 100 licences provided 371 hunter-days recreation for 99 hunters with a harvest of 18 moose, a 42% decline from 1984 (Table 39).

v. Greenwater Park (WMZ 56):
Harvest data is not available for the 50 licence season.

Table 32. Special Draw Moose Harvest - Forest 1985

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
57	192	192	74	38.5	74	1.53	1	0.47	1,007	14	0.3043
58	187	187	54	29.0	54	0.44	1	0.38	753	14	0.3355
59	367	367	122	33.2	122	0.90	1	0.26	1,674	14	0.2820
60	195	195	56	28.8	56	0.93	1	0.20	974	17	0.2487
61	95	95	41	43.1	41	1.18	1	0.09	405	10	0.1332
62	49	49	7	14.3	7	1.00	1	0.00	279	40	0.0629
67	198	198	64	32.2	64	1.12	1	0.25	897	14	0.1035
68	198	198	75	38.0	75	1.05	1	0.15	755	10	0.1815
	1,481	1,482	493	33.3	493	0.99	1	0.25	6,743	14	0.1668
48, 49, 56	344	346	119	34.6	119	1.00	1	0.32	1,658	14	0.6[illegible]
	1825	1828	612	34.0	612	—	—	—	8401	14	—

Table 33. Regular Moose Harvest - Forest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST

SPECIES: MOOSE

TYPE OF LICENSE: REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
56	1,077	1,233	241	22.3	241	150.34	1	90.21	5,237	22	1.1080
57	1,003	1,148	190	19.0	190	125.29	1	65.15	4,813	25	1.4551
58	385	441	85	22.1	85	70.16	1	15.03	1,724	20	0.7679
59	1,073	1,228	200	18.7	200	150.34	1	50.11	4,906	24	0.8267
60	442	506	80	18.1	80	50.11	1	30.07	1,977	25	0.5050
61	193	221	35	18.2	35	15.03	1	20.05	807	23	0.2654
62	206	236	15	7.3	15	10.02	1	5.01	839	56	0.1894
63	254	291	25	9.9	25	15.03	1	10.02	1,138	45	0.2293
64	136	155	20	14.8	20	15.03	1	5.01	549	27	0.1539
65	48	55	10	20.8	10	5.01	1	5.01	160	16	0.0246
66	342	391	60	17.6	60	35.08	1	25.06	1,443	24	0.1280
67	784	897	125	16.0	125	85.19	1	40.09	3,372	27	0.3887
68	363	416	100	27.6	100	35.08	1	65.15	1,413	14	0.3399
69	245	281	50	20.4	50	45.10	1	5.01	972	19	0.1254
70	88	100	5	5.7	5	5.01	1	0.00	278	56	0.0327
71	44	50	5	11.4	5	5.01	1	0.00	188	38	0.0104
72	57	65	5	8.8	5	0.00	1	5.01	291	58	0.0158
73	109	125	20	18.3	20	10.02	1	10.02	579	29	0.0126
	6,848	7,838	1,273	18.6	1,273	826.89	1	446.02	30,687	24	0.1857

Table 34. Regular Moose Harvest - Northern Shield 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: NORTHERN SHIELD

SPECIES: MOOSE

TYPE OF LICENSE: REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
74	22	30	5	23.2	5	0.00	1	5.01	180	36	0.0040
75	7	10	0	0.0	0	0.00	1	0.00	50	.	0.0009
76	18	25	10	55.6	10	0.00	1	10.02	75	8	0.0009
	47	65	15	32.1	15	0.00	1	15.03	306	20	0.0017

Table 35. Regular Moose Harvest - Forest Fringe and Parkland 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: MOOSE TYPE OF LICENSE: REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	87	120	30	34.7	30	10.02	1	20.05	386	13	0.1525
49	144	200	50	34.7	50	15.03	1	35.08	722	14	0.3015
53	115	160	5	4.3	5	5.01	1	0.00	549	110	0.1980
55	170	236	30	17.7	30	15.03	1	15.03	797	27	0.2125
	516	717	115	22.3	115	45.10	1	70.16	2,454	21	0.2143

ECOLOGICAL DIVISION: PARKLAND

SPECIES: MOOSE TYPE OF LICENSE: REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
43	36	85	10	27.5	10	10.02	1	0.00	263	26	0.0397
	36	85	10	27.5	10	10.02	1	0.00	263	26	0.0397

Table 36. Structure of the Moose Harvest for the Northern Commercial Forest

	1985				1984			
Licence Type	Males	Cows	Calves	Males/Cow/Calves	Males	Cows	Calves	Males/Cow/Calves
Special Early	116	74	20	1.56/1/0.27	118	53	22	2.23/1/0.42
Special Late	180	223	63	0.80/1/0.28	160	301	118	0.53/1/0.39
Regular Early	275	0	110	275.0/1/110.0	456	0	91	456.0/1/91.0
Regular Late	605	0	420	605.0/1/420.0	1138	0	687	1138.0/1/687.0
Total	1176	297	613	3.96/1/2.06	1872	354	918	5.30/1/2.60
Percent	(56%)	(14%)	(30%)		(60%)	(11%)	(29%)	

Table 37. Sex by Year Class Harvest of Moose from Check Station Samples 1985 (n=956)

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PROC TABULATE OF SEX BY YEAR CLASS FROM 1985 MOOSE;                    TITLE6 CHECKSTATIONS;
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TABLE OF SEX BY YR_CLASS

SEX	YR_CLASS												
FREQUENCY PERCENT ROW PCT COL PCT	0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	99.9	TOTAL
FEMALE	84 8.79 32.56 41.79	47 4.92 18.22 22.27	32 3.35 12.40 18.82	20 2.09 7.75 18.52	11 1.15 4.26 21.15	4 0.42 1.55 15.38	15 1.57 5.81 46.88	7 0.73 2.71 33.33	7 0.73 2.71 29.17	6 0.63 2.33 33.33	15 1.57 5.81 53.57	10 1.05 3.88 15.38	258 26.99
MALE	117 12.24 16.76 58.21	164 17.15 23.50 77.73	138 14.44 19.77 81.18	88 9.21 12.61 81.48	41 4.29 5.87 78.85	22 2.30 3.15 84.62	17 1.78 2.44 53.13	14 1.46 2.01 66.67	17 1.78 2.44 70.83	12 1.26 1.72 66.67	13 1.36 1.86 46.43	55 5.75 7.88 84.62	698 73.01
TOTAL	201 21.03	211 22.07	170 17.78	108 11.30	52 5.44	26 2.72	32 3.35	21 2.20	24 2.51	18 1.88	28 2.93	65 6.80	956 100.00

FREQUENCY MISSING = 3

Figure 7. Distribution of Sex and Age of 1985 Moose Check Station Sample

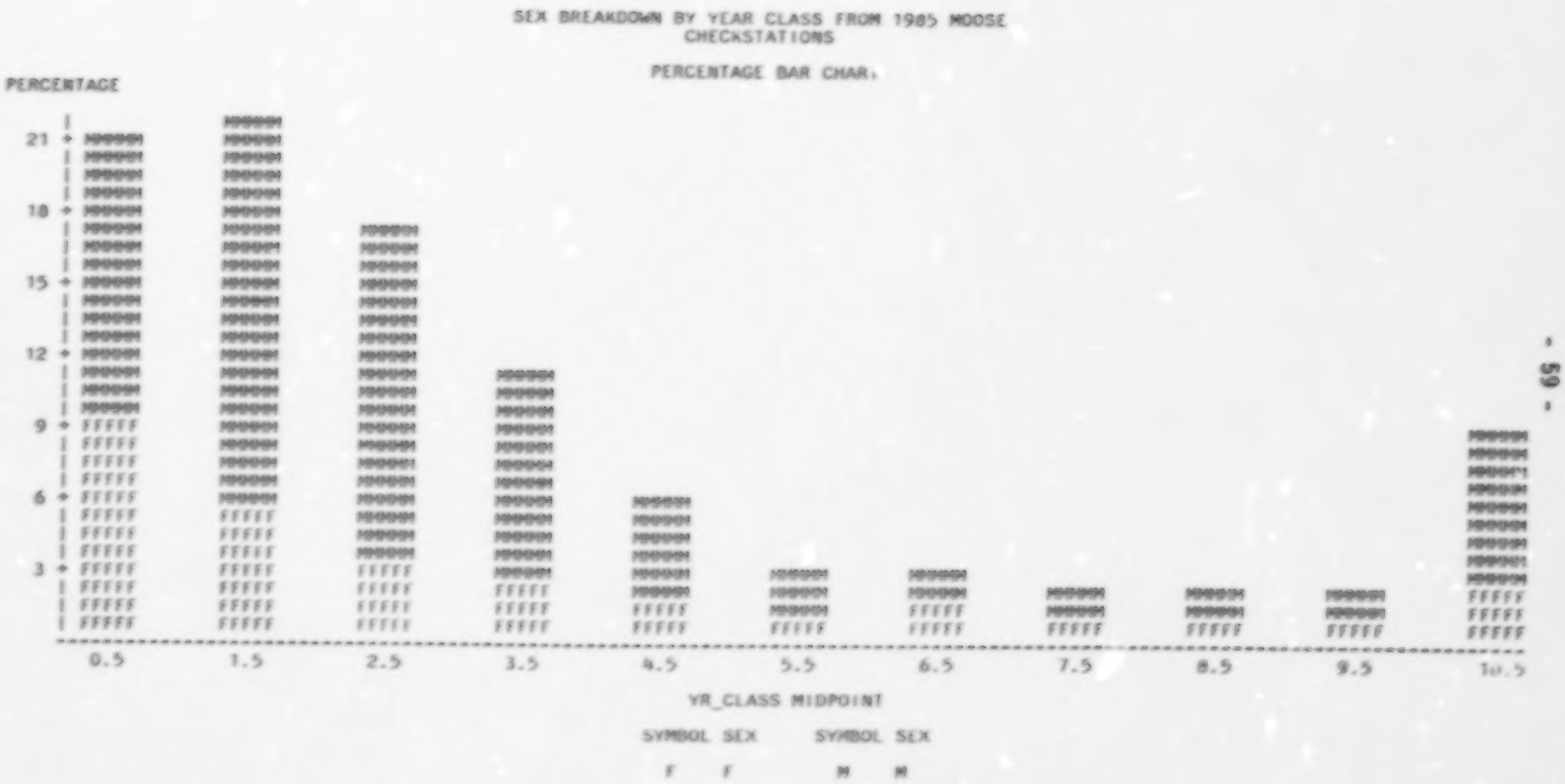


Figure 8. Provincial Moose Harvest Check Station Statistics - 1985.

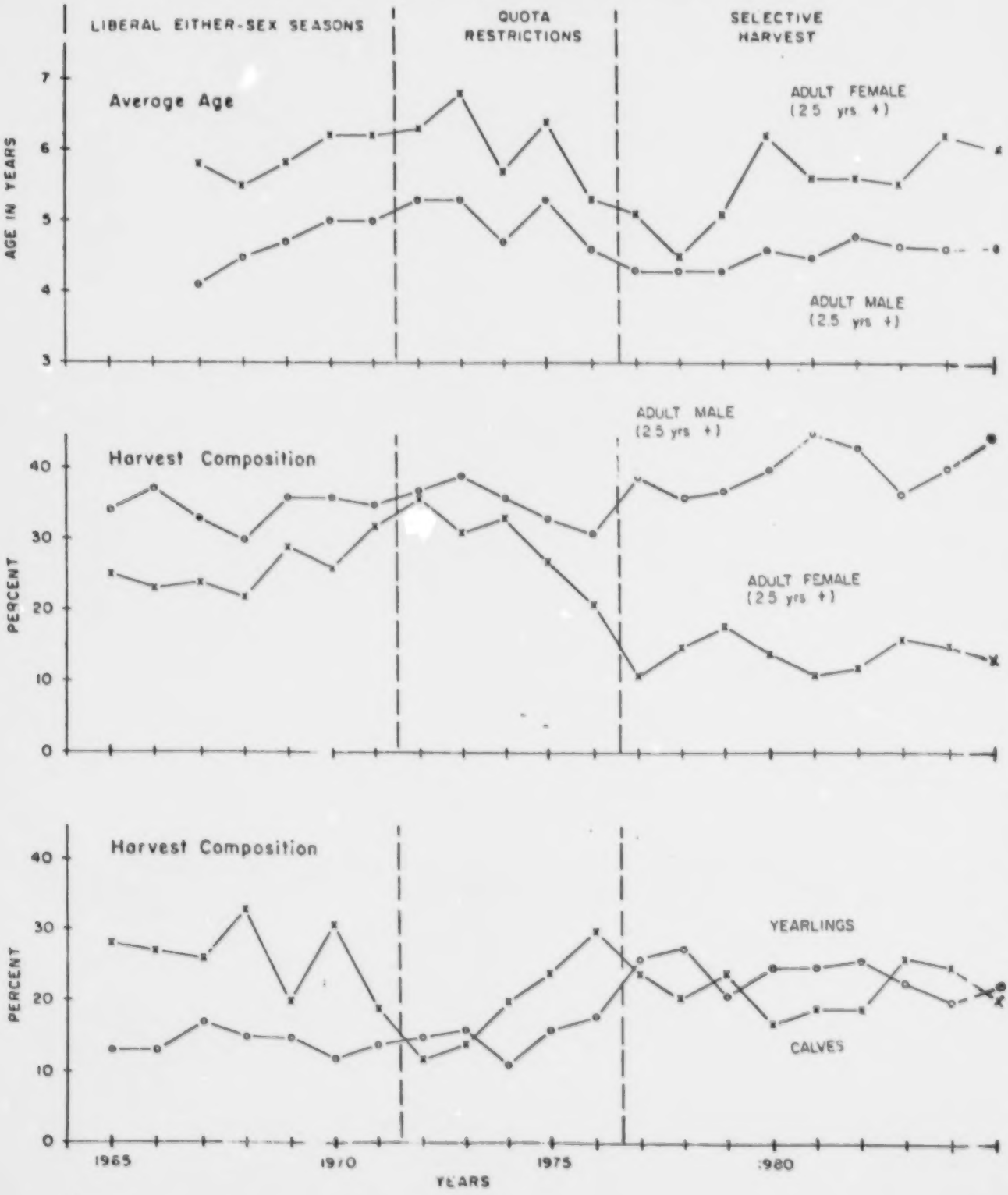


Table 38. Age Proportions of Adults in Moose Harvest 1980 - 1985

Age Class	1980 Cows n=89	1980 Bulls n=277	1981 Cows n-58	1981 Bulls n=247	1982 Cows n=98	1982 Bulls n=285	1983 Cows n=153	1983 Bulls n=434	1984 Cows n=196	1984 Bulls n=531	1985 Cows n=164	1985 Bulls n=526
1 1/2	0.25	0.23	0.26	0.26	0.20	0.28	0.23	0.38	0.25	0.31	0.29	0.31
2 1/2	0.18	0.21	0.10	0.19	0.16	0.22	0.20	0.22	0.10	0.22	0.20	0.26
3 1/2	0.10	0.17	0.16	0.19	0.14	0.14	0.10	0.16	0.10	0.16	0.12	0.17
4 1/2	0.07	0.14	0.14	0.11	0.08	0.11	0.11	0.06	0.09	0.09	0.07	0.08
5 1/2	0.03	0.09	0.03	0.08	0.11	0.08	0.06	0.06	0.08	0.06	0.02	0.04
6 1/2	0.09	0.06	0.07	0.08	0.08	0.04	0.10	0.04	0.10	0.05	0.09	0.03
7 1/2	0.03	0.04	0.12	0.03	0.06	0.04	0.05	0.02	0.08	0.04	0.04	0.03
8 1/2	0.01	0.02	0.00	0.04	0.03	0.03	0.03	0.02	0.07	0.03	0.04	0.04
9 1/2	0.06	0.02	0.03	0.01	0.04	0.05	0.04	0.02	0.04	0.01	0.04	0.02
10 1/2+	0.18	0.02	0.09	0.01	0.10	0.02	0.08	0.04	0.09	0.03	0.09	0.02
Mean Age (2.5 yrs+)	6.2	4.6	5.6	4.5	5.6	4.8	5.5	4.6	6.2	4.5	5.8	4.2

Table 39. Special Draw Moose Harvest - Parkland, Fort a la Corne and Archery, 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: PARKLAND

SPECIES: MOOSE TYPE OF LICENSE: SPECIAL DRAW LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
37	99	99	18	17.7	18	0.40	1	0.80	371	21	0.0328
	99	99	18	17.7	18	0.40	1	0.80	371	21	0.0328

ECOLOGICAL DIVISION: FOREST

SPECIES: MOOSE TYPE OF LICENSE: ARCHERY

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
68	36	36	2	6.7	2	0.00	1	2.40	161	67	0.0387
	36	36	2	6.7	2	0.00	1	2.40	161	67	0.0387

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: MOOSE TYPE OF LICENSE: SPECIAL DRAW LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
50	97	98	23	23.9	23	2.00	1	0.75	566	24	0.1693

B. POPULATION STATUS

1. Density: Transect Surveys

- Provincial trend survey estimates continue to improve from 0.33 moose/km^2 (1984-85) to 0.35 moose/km^2 (1985-86) excluding Greenwater Park with population densities higher in 8 of the 14 survey units (Table 40).
- Northwest commercial forest zones improved slightly with the exception of the Waterhen-Keeley (WMZ 69) and Divide Forest (WMZ 67) areas. All zones, however remain 20% to 50% below the 1976-86 long term average with densities ranging from 0.17 to 0.46 moose/km^2.
- Central commercial forest zones continue to decline (-9% to -29%), remaining 23% to 43% below the long term average with densities ranging from 0.10 to 0.12 moose/km^2.
- Northeastern commercial forest zones improved slightly except for the Pine Bluff (WMZ 61) area. The Hudson Bay zones remain above the long term average with 0.41 to 0.74 moose/km^2. The Cumberland Delta zones are still below the long term average but show positive signs of recovery (0.39 to 0.56 moose/km^2) as a result of quota restrictions and bear control efforts.

2. Density: Quadrat Surveys

- The Candle Lake Game Preserve (WMZ 64) was surveyed intensively in order to collect baseline data for the ongoing Moose Restoration Program. With an estimated population of 236 ± 23% moose or 0.15 moose/km^2, densities in the game preserve are currently similar to transect densities of 0.10 and 0.12 moose/km^2 in WMZ 63 and 62, respectively (Table 41).

Table 40. Moose Densities in Aerial Transect Survey Block, 1976-1986

Area	Zone	Sq. Km	Moose/km^2 1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1976-86 Average	Change from last Survey (%)	Change from Average (%)
Porcupine East	57	284.9	0.33	0.62	0.22	0.38	0.48	0.47	0.36	0.58	0.28	0.44	0.45	0.42	+2	+5
Porcupine West	56	201.0	0.50	0.49	0.42	0.94	0.59	0.47	0.54	0.68	0.39	0.42	0.67	0.55	+60	+22
Leaf Lake	58	223.7	0.25	0.49	0.53	0.44	0.29	0.29	0.50	0.36	0.40	0.36	0.41	0.39	+14	+5
Greenwater	58	42.7	0.33	0.44	0.14	0.28	0.28	0.21	0.19	0.89	0.37	0.52	1.26*	0.45	+142	+180
Cumberland South	60	375.5	0.56	0.50	0.50	0.59	0.52	0.49	—	0.49	0.43	0.35	0.46	0.49	+31	-6
Cumberland Central	60	106.2	0.39	0.62	0.47	0.50	0.39	0.73	0.41	0.37	0.32	0.44	0.56	0.47	+27	+19
Pine Bluff	61	119.1	0.98	0.66	1.21	1.17	0.77	0.91	0.94	0.81	0.83	0.64	0.39	0.85	-39	-54
Connell Creek ***	59	116.5***	—	—	—	—	1.20	1.18	0.71	0.68	0.65	0.82	0.74	0.85	-10	-13
Candle Lake East	63	251.2	0.09	0.24	0.15	0.17	0.08	0.15	—	0.12	0.04	0.11	0.10	0.13	-9	-23
Torch River	62	196.8	0.25	0.20	0.34	0.26	0.21	0.21	0.18	0.25	0.10	0.17	0.12	0.21	-29	-43
Dore South	66	626.8	0.14	0.23	0.13	0.32	0.27	0.19	0.17	0.13	0.07	—	0.09	0.17	+29	-47
Waterhen-Keeley **	69	353.5**	0.14	0.27	0.24	0.23	0.33	0.21	—	—	0.27	0.18	0.11	0.23	-39	-52
Cold Lake	69	248.6	0.23	0.31	0.26	0.34	0.30	0.29	—	0.20	0.13	0.15	0.19	0.24	+27	-21
Divide	67	422.2	0.34	0.42	0.28	0.53	0.46	0.39	0.27	0.19	0.30	0.44	0.26	0.35	-41	-26
Bronson	68	392.1	0.51	0.59	0.62	0.51	0.56	0.42	—	0.24	0.49	0.31	0.34	0.46	+10	-26

* not included in average ** revised survey in 1980 *** revised survey in 1981

Table 41. Moose Population Estimates (Stratified Random Block Sampling) for the Candle Lake Game Preserve, Woody Burn and Moose Mountain Park, 1983-86.

WMZ	Survey Block	Area (Km^2)	Dec. - Feb. Population Estimates ± 95% C.I. 1983	1984	1985	1986	Moose/km^2
33	Moose Mountain	698	463±93	370±69	356±82	302±59	0.43±0.08
57	Woody Burn	1134	—	686±135 (Dec. 83-Jan. 84)	—	765±136	0.67±0.12
64	Candle G.P.	1599	—	—	—	236±55	0.15±0.03

- The Woody Lake Burn moose population is estimated at 765 ± 18% moose (+ 12%), alleviating concerns that opening the former game preserve in 1985 would attract too many hunters and result in an overharvest of moose (Table 41). Densities in the Woody Burn are higher than WMZ 57 indicating that short term game preserve status accompanied by road closure initiatives can result in a dramatic increase in a moose population in a relatively short period of time.

3. Population Structure:

(a) Aerial Surveys

- In the commercial forest zones, 2,233 moose were classified by sex and age in 12 WMZ's using a helicopter during December, 1985 (Table 42). The provincial estimate of 50 bulls/100 cows/47 calves (13% twinning rate) indicates a healthy population structure with only minor differences in the ratio's when compared to 41 bulls/100 cows/49 calves (13% twinning rate) in 1984.
- Small improvements in calf survival were noted in WMZ 56, 57, 58 and 60. Lower calf/cow ratios are evident in WMZ 59 (35 calves/100 cows) and WMZ 69 (30 calves/100 cows).

(b) Co-operative Wildlife Management Study Observations.

- A total of 615 moose were classified between September and November, 1985 compared to 437 moose in 1984 (Table 43).
- Observers reported 84 bulls/100 cows/58 calves (21% twinning rate), consistent with the 1984 observations.

Table 42. 1984-85 Moose Sex and Age Helicopter Observations

WMZ	December 1983 Males	Females	Calves	Total	Males/100 Females/ Calves	Twinning Rate (%)	December 1984 Males	Females	Calves	Total	Males/100 Females/ Calves	Twinning Rate (%)
56	47	68	47	= 162	69/100/69	21	31	74	43	= 148	42/100/58	23
57	25	84	46	= 155	30/100/55	7	26	85	28	= 146	31/100/41	29
58	35	111	65	= 211	32/100/59	20	26	77	31	= 134	34/100/40	15
59	117	260	92	= 469	45/100/35	8	32	61	33	= 126	52/100/54	17
60	40	69	37	= 146	58/100/54	9	26	95	31	= 152	27/100/33	6
60(a)*	31	33	15	= 79	94/100/45	15	62	129	62	= 253	48/100/48	—
61	62	97	43	= 202	64/100/44	16	53	133	68	= 254	40/100/51	17
61(a)**	20	36	15	= 71	56/100/42	15	44	81	27	= 152	54/100/33	—
63	27	44	19	= 90	61/100/43	6	—	—	—	= —	—	—
64	41	33	13	= 87	124/100/39	8	35	80	23	= 108	20/100/48	28
66	23	46	19	= 88	50/100/41	6	26	54	22	= 102	48/100/50	2
67	34	88	48	= 170	39/100/55	14	32	82	45	= 159	39/100/45	5
68	26	83	51	= 160	31/100/61	19	33	79	51	= 163	42/100/65	16
69	28	81	24	= 143	47/100/30	9	26	85	42	= 164	43/100/51	8
Commercial Forest	566	1133	534	= 2233	50/100/47	13	425	1035	503	= 1963	41/100/49	13

* 60(a) - Lobstick Lake - Bear removal study area
** 61(a) - Bearhead Marsh - Bear removal study area
- Twinning rates based on % of cows with calves having twins.

Table 43. Moose Population Structure - Sept - Nov 1985
(Co-operative Wildlife Management Study)

WMZ	NUMBER OF MOOSE							
	Mature Males (%)	Cows	Calves	Males / 100 Females	Calves / 100 Females	% Cows with Calves Single	Twins	Triplets
6	4	4	0	100	0	0	0	0
7	10	9	6	111	67	80	20	
GRASSLAND	14	13	6	108	46	80	20	
32	0	1	1	0	100	100	0	0
33	4	6	5	67	83	50	50	0
34	10	0	0	0	0	0	0	0
37	11	23	11	48	48	63	38	0
39	1	1	0	100	0	0	0	0
43	1	2	2	50	100	100	0	0
44	1	0	0	0	0	0	0	0
45	4	0	0	0	0	0	0	0
47	1	0	0	0	0	0	0	0
PARKLAND	33	33	19	100	58	60	31	0
648	1	2	2	50	100	100	0	0
49	2	0	0	0	0	0	0	0
50	3	6	6	50	100	75	25	0
53	6	1	2	600	200	0	100	0
54	4	3	4	133	133	67	33	0
55	1	3	1	33	33	100	0	0
FRINGE	17	15	15	113	100	73	27	0
56	35	43	30	81	70	83	17	0
57	13	18	12	72	67	67	33	0
58	9	10	5	90	50	75	25	0
59	12	17	11	71	65	89	11	0
60	13	21	11	62	52	100	0	0
61	12	17	6	71	35	83	17	0
62	6	3	4	200	133	67	33	0
63	11	10	5	110	50	75	25	0
64	6	1	0	600	0	0	0	0
66	14	32	15	44	47	80	20	0
69*	4	3	0	133	0	0	0	0
70	4	1	2	400	200	100	0	0
71	3	5	0	60	0	100	0	0
COMMERCIAL FOREST	148	188	105	79	56	81	19	0
74	0	1	1	0	100	100	0	0
76	1	5	1	20	20	100	0	0
SHIELD	1	6	2	17	33	100	0	0
TOTAL	213	255	147	84	58	79	21	0

4. Southern WMZ: Population Status

a) Cypress Hills Park (WMZ 6 and 7):

- The population in WMZ 7 remains in a depressed state owing to poor browse conditions and unregulated harvest in the West Block. A helicopter transect survey in the East Block or WMZ 6 (February 1986) observed 101 moose (78 adults and 23 calves) located primarily on private land.

b) Fort a la Corne WMU (WMZ 50):

- No aerial survey was conducted in 1985-86.

c) Duck Mountain Park (WMZ 37):

- No aerial survey was conducted in 1985-86. There is however concern that unregulated harvest may be preventing growth of the population.

d) Greenwater Park (WMZ 56):

- A transect survey resulted in an increase from 0.52 moose/km^2 (1984-85) to 1.26 moose/km^2 (1985-86). The Greenwater population densities from the transect survey are recognized as having large annual fluctuations (Table 40).

e) Moose Mountain Park (WMZ 22):

- A quadrat survey indicates a progressively declining population from 463 ± 20% moose in 1983 to 302 ± 20% moose in 1986 (Table 41). Unregulated harvest continues to remain high and is the major factor limiting population growth.

C. SPECIAL PROJECTS

1. Bear Removal Study Areas - WMZ 60a + 61a

- Intensive helicopter surveys in WMZ 60 (Lobstick Area) in September 1985 revealed 57 calves/100 mature cows (n=39) within the bear removal area compared to 87 calves/100 mature cows (n=98) in October 1984. In WMZ 61 (Bearhead Marsh Area) the ratios have fluctuated from 80 calves/100 mature cows in September 1983 (n=61), 52 calves/100 mature cows in October 1984 (n=145), to 75 calves/100 mature cows in September 1985 (n=38).
- Ratios in the control or larger wildlife management zone area were 39/100 (Oct. 84 n=93) for WMZ 60 and 40/100 (Sept. 83 n=111), 67/100 (Oct. 84 n=45), and 56/100 (Sept. 85 n=37) for WMZ 61, respectively.

- The ratios indicate that calf survival is higher in the bear removal area than in the surrounding WMZ but that survival is declining annually probably as a result of immigration of bears into the Lobstick and Bearhead Marsh areas, either on a seasonal or permanent basis.
- The study suggests that calf survival can be improved by the removal of bears but that a control program must be implemented on a regular basis to maintain optimum calf/mature cow ratios.

D. 1986 MANAGEMENT OBJECTIVES

Moose populations continued to improve in the northwest and northeast forest zones in 1985. However problems in the central (forest road access) and eastern (bear predation) areas still require special management action.

The main objective of long range management is to increase the Saskatchewan moose population, harvest and recreation to levels much higher than currently exist. The biological objectives of the moose management program introduced in 1977 remain the same today. The department is actively engaged in programs like the establishment of the Moose Restoration Program, Area Game Preserves, Road Corridor Game Preserves and Bear Removal Incentives to reduce the impact of the population limiting factors.

1. **HOLD THE LINE** on 1986 special quotas except for a reduction of 50 licences in WMZ 67 and a new 25 licence quota in WMZ 6. A high level of protection for breeding females will be maintained by keeping quotas similar to last year.

2. The early and late regular season structure will be maintained for all WMZ's except Guided Moose. Harvests delined in 1985 as a result of colder weather in the late seasons. Despite an increase in active hunters and hunting effort, success rates were significantly lower than 1984.

3. A complete closure of seasons in the Central Forest zones was considered in response to record low densities. However, rather than completely eliminate hunting recreation, the game preserve and road closure initiatives will be used to increase populations.

4. The strategy to protect moose in the peak rut will be continued by moving the Guided Moose early season dates ahead to correspond with the regular moose season commencing October 6th.

5. The impact of the Moose Restoration Program on moose populations will continue to be monitored closely. Although there was no new game preserves initiated in 1985, there was some closure of unused forest access roads throughout most commercial forest zones.

6. WMZ 68 will be included in the existing all terrain vehicle restriction for WMZ's 48, 49, 56 to 59 so that A.T.V.'s may only be operated between noon and midnight. Extensive seismic activity over the past several years has created a network of cut-lines in WMZ 68 with the result that vehicle abuse is having a negative impact on hunter recreation and moose populations.

7. Southern Areas:

a) Moose Mountain Provincial Park (WMZ 33):

The season will remain closed to sport hunters in 1986.

b) Cypress Hills Park (WMZ 6+7):

In view of an increasing moose population in WMZ 6, a small 25 licence quota will be introduced in 1986. WMZ 7 will remain closed due to low populations and existing unregulated harvest.

c) Thickwood Hills (WMZ 54):

The population is presently too low due to continued unregulated hunting pressure to warrant a season in 1986.

d) Fort a la Corne WMU (WMZ 50) (100 licences):

A quota of 100 licences will be maintained in 1986.

e) Duck Mountain Park (WMZ 37) (100 licences):

The present format will be retained as the existing hunting regime appears to be maintaining stable populations. There is concern over increased unregulated hunting and the impact on long term population growth.

f) Greenwater Park (in WMZ 56) (50 licences):

A quota of 50 licences will be maintained in 1986.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 MOOSE HUNTING REGULATIONS.

MULE DEER

A. REVIEW OF 1985 HUNTING SEASON

1. Licence Sales

	1979	1980	1981	1982	1983*	1984*	1985*
Regular	4,006	4,100	4,329	5,471	5,754	5,754	6,561
Antlerless	—	—	—	1,913	1,455	6,331	9,069
Archery	250	245	351	600	775	804	969
TOTAL	4,256	4,345	4,679	7,984	7,984	12,889	16,609

* Final (June 1) sales figures; however all data analysis based on figures available in March and projected to June 1.

- Regular licence quotas have increased 300% since 1979.
- Antlerless quotas introduced in 1983 were expanded in 1984 and 1985.

2. Harvest
   - The mule deer harvest increased 49% from 10,950 in 1984 to 16,311 in 1985 (Table 44).
   - Regular either-sex season hunter success was 73%, which represents a decrease from the 94% reported for 1984 (Table 45).
   - Antlerless hunter success was 75% in 1985, down from 94% in 1984. Liberal quotas of two antlerless mule deer per licence in WMZ's 2, 9, 10 and 11 to 14 were introduced in 1985. Only 52% of antlerless mule deer hunters harvested 2 deer thus accounting for the overall drop in success (Table 46).
3. Hunter Recreation
   - Recreation-days totalled 29,435, which is a substantial increase from the 13,058 days in 1984 (Tables 44).
   - Hunter-days/animal increased from 1.0 in 1984 to 3.0 in the regular season and remained at 1.0 for the antlerless season.

Table 44. Provincial Mule Deer Harvest 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

FOR THE 1985 HUNTING YEAR

SUMMARY TOTALS FOR SPECIES: MULE DEER

ZONE	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
[illegible]	14,680	14,692	10,676	72.4	15,349	0.33	1	0.40	26,336	2	0.4064
FARM	1,298	1,297	876	67.7	876	2.14	1	0.20	2,635	3	0.0553
PARK	151	151	85	56.5	85	2.26	1	0.13	464	5	0.0340
INDIAN	0	0	0	0.0	0	0.00	1	0.00	0	-	-
FOREST	0	0	0	0.0	0	0.00	1	0.00	0	-	-
SHIELD	0	0	0	0.0	0	0.00	1	0.00	0	-	-
[illegible]	16,129	16,140	11,587	71.9	16,311	0.39	1	0.39	29,435	2	0.2335

Table 45. Regular Mule Deer Harvest - Hunting Success and Pressure 1985

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: MULE DEER

TYPE OF LICENSE: 1ST REGULAR LICENSE (DRAW)

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	101	101	76	75.0	76	4.20	1	0.20	202	3	0.0243
2	967	967	674	69.7	674	3.09	1	0.15	1,713	3	0.1610
3	282	282	195	69.0	195	1.51	1	0.16	484	2	0.1126
4	75	75	50	66.1	50	11.33	1	0.67	111	2	0.0136
5	295	295	230	77.9	230	3.89	1	0.39	498	2	0.0834
6	388	388	282	72.8	282	3.72	1	0.17	728	3	0.1736
7	292	292	196	67.3	196	2.72	1	0.17	591	3	0.3119
8	51	51	36	71.1	36	7.67	1	0.33	78	2	0.0230
9	491	491	366	74.5	366	4.29	1	0.21	771	2	0.2244
10	756	756	610	80.8	610	5.45	1	0.22	1,125	2	0.3173
12	139	139	113	81.2	113	3.81	1	0.31	214	2	0.6224
13	392	392	322	82.2	322	4.30	1	0.30	586	2	0.1435
14	589	589	451	76.6	451	2.68	1	0.27	981	2	0.1757
	4,818	4,818	3,602	74.8	3,602	3.54	1	0.22	8,080	?	0.1266
FARMLAND											
19	196	196	135	68.9	135	3.21	1	0.42	389	3	0.0422
23	198	198	118	59.6	118	2.19	1	0.24	406	3	0.0707
24	202	202	139	68.7	139	2.07	1	0.13	416	3	0.0862
25	148	148	104	70.2	104	3.62	1	0.06	258	2	0.0443
26	198	198	147	74.3	147	1.76	1	0.10	372	3	0.0824
27	150	150	105	69.9	105	2.19	1	0.10	251	2	0.0511
29	100	100	71	70.5	71	1.62	1	0.31	270	4	0.0506
30	102	102	58	57.0	58	0.92	1	0.31	273	5	0.0376
	1,294	1,294	876	67.7	876	2.14	1	0.20	2,635	3	0.0553
PARKLAND											
45	50	50	24	48.3	24	1.60	1	0.20	211	9	0.0275
46	101	101	61	60.6	61	2.60	1	0.10	252	4	0.0424
	151	151	85	56.5	85	2.26	1	0.13	464	5	0.0340
Total	6,263	6,263	4,563	72.8	4,563				11,179	3	

Table 46. Antlerless Mule Deer Harvest, Hunting Success and Pressure 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: MULE DEER

TYPE OF LICENSE: 1ST ANTLERLESS LICENSE

WMZ	# ACTUAL HUNTERS	# /ONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	77	77	52	67.3	91	0.00	1	0.41	120	1	0.0144
2	1,455	1,455	919	63.2	1,484	0.01	1	0.43	2,507	2	0.2356
3	99	99	75	75.8	129	0.01	1	0.27	157	1	0.0365
5	289	289	223	77.2	376	0.04	1	0.37	392	1	0.0658
6	487	487	361	74.2	595	0.01	1	0.29	749	1	0.1785
7	179	179	114	63.6	189	0.02	1	0.32	303	2	0.1598
8	46	46	42	91.7	75	0.02	1	0.32	58	1	0.0170
9	492	492	395	80.3	668	0.03	1	0.43	776	1	0.2260
10	2,943	2,944	2,345	79.7	4,144	0.02	1	0.40	4,624	1	1.3039
11	475	475	389	81.9	717	0.02	1	0.48	695	1	0.7052
12	486	486	397	81.7	700	0.02	1	0.57	674	1	1.9586
13	788	788	583	74.0	982	0.01	1	0.50	1,220	1	0.2987
14	1,175	1,175	806	68.6	1,274	0.01	1	0.38	1,945	2	0.3486
	8,991	8,994	6,701	74.5	11,425	0.02	1	0.42	14,219	1	0.2509

4. Harvest Structure

(a) Hunter Questionnaire

- The buck ratio in the regular harvest (351 males/100 females) was slightly higher than that reported in 1984 and similar to that reported in 1980-82 prior to the introduction of antlerless seasons (Table 45).
- The antlerless season yielded fawn/doe ratios ranging from 27-57 fawns/100 females (average 42/100) with the highest ratio present in WMZ 12 (Table 46).

(b) Check Stations

- Check stations were operated during the antlerless mule deer season in WMZ 10, 11 and 12 and during both portions of the WMZ 12 regular season.
- Age structure of the antlerless harvest was similar to that of 1983 with the fawn segment accounting for 37% of the harvest, compared to 27% in 1984 (Tables 47, 48; Figure 9).
- Yearling females (1.5 age class) comprised 15% of the 1985 antlerless harvest compared to 21% of the 1984 antlerless harvest (Table 48). This reduction in the yearling harvest likely reflects low fawn/doe ratios reported in 1984 (68/100).
- Harvest structure in the regular season in WMZ 12 was 363 bucks/100 does/13 fawns and 400 bucks/100 does/50 fawns in the first and second seasons, respectively.

5. Archery

- For all seasons a total of 871 active bowhunters harvested 320 mule deer on regular either-sex and antlerless licences in 1985 (Table 49).
- A quota of 300 antlerless licences (2 animals/licence) were offered to archers with 125 antlerless mule deer being harvested by 172 active bowhunters.
- Hunter-days/animal for archers with either sex licences increased to 15 in 1985 from 9 in 1984. For the antlerless licence holders average hunter-days/animal was 6.

Table 47. Year Class Composition of Provincial Antlerless Mule Deer Harvest (Check Stations) (Either Sex WMZ 12 Harvest Included) 1985

SEX / FREQUENCY / PERCENT / ROW PCT / COL PCT	YEAR CLASS 0.5	1.5	2.5	3.5	4.5	5.5	6.5	7.5	8.5	9.5	9.9	10.5	99.9	TOTAL
FEMALE	423	284	392	284	134	70	48	26	17	14	25	3	12	1733
	19.03	12.78	17.63	12.78	6.03	3.15	2.16	1.17	0.76	0.63	1.12	0.13	0.54	77.96
	24.41	16.39	22.62	16.39	7.73	4.04	2.77	1.50	0.98	0.81	1.44	0.17	0.69	
	41.27	47.12	95.61	95.95	95.04	98.59	100.00	96.30	100.00	100.00	80.65	100.00	92.31	
MALE	402	42	18	11	7	1	0	1	0	0	6	0	1	489
	18.04	1.89	0.81	0.49	0.31	0.04	0.00	0.04	0.00	0.00	0.27	0.00	0.04	22.00
	82.21	8.59	3.68	2.25	1.43	0.20	0.00	0.20	0.00	0.00	1.53	0.00	0.20	
	48.73	12.88	4.39	3.72	4.96	1.41	0.00	3.70	0.00	0.00	19.35	0.00	7.69	
?	0	0	0	1	0	0	0	0	0	0	0	0	0	1
	0.00	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
	0.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	0.00	0.00	0.00	0.34	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
TOTAL	825	326	410	296	141	71	48	27	17	14	31	3	13	2223
	37.11	14.66	18.44	13.32	6.34	3.19	2.16	1.21	0.76	0.63	1.39	0.13	0.58	100.00

Table 48. Sex and Age Structure of Mule Deer from Check Stations 1985

	Zone 10						Zone 11						Zone 12						Combined					
	Fawns		Yearlings		Adults		Fawns		Yearlings		Adults		Fawns		Yearlings		Adults		Fawns		Yearlings		Adults	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
# Animals	241	264	25	175	1	607	51	59	5	42	-	155	110	100	12	68	44	263	402	423	42	284	45	1026
Percent	18	20	2	13	1	47	16	19	2	13	-	50	18	17	7	11	7	40	18	19	2	13	2	46
Males/Female		.90		.14		.01		0.86		0.12		—		1.1		.18		.17		.95		—		—

* Regular either-sex season check stations operated in addition to antlerless season.

Figure 9 . Year Class Composition of Provincial Antlerless Mule Deer Harvest (Check Stations) 1985

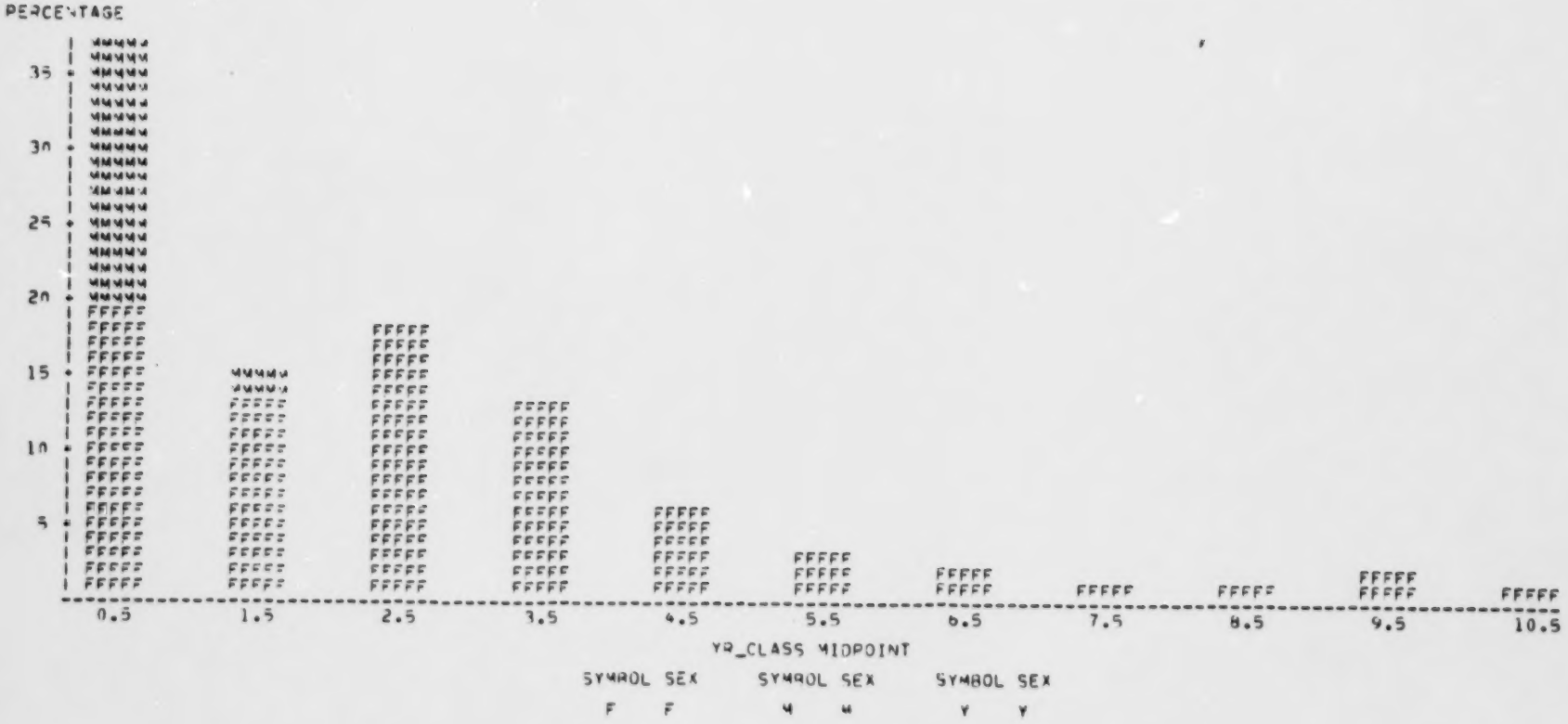


Table 49. Archery Either Sex Mule Deer Harvest - Hunting Success and Pressure 1985

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: MULE DEER

TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1*	571	575	141	24.7	141	1.79	1	0.21	2,692	19	0.3235
9	137	138	59	43.4	72	2.20	1	0.20	608	8	0.1770
12	48	48	21	44.3	23	0.57	1	0.14	204	9	0.5928
	756	761	222	29.4	237	1.70	1	0.19	3,504	15	0.0549

Table . Archery Antlerless Mule Deer Harvest - Hunting Success and Pressure 1985

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: MULE DEER

TYPE OF LICENSE: 1ST ARCHERY ANTLERLESS

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1*	68	69	16	24.2	27	0.07	1	0.13	393	15	0.0473
9	43	44	27	61.7	53	0.05	1	0.35	133	3	0.0386
12	4	4	2	50.7	3	0.00	1	0.00	7	2	0.0192
	115	117	45	39.2	83	0.05	1	0.26	533	6	0.0082

*WMZ's 1 to 8, 13, 14, 18 to 27, 39, 30, 45 & 46

- Success rate varied from 24.7% in combined WMZ 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 to 44% in WMZ 9 and 10 combined for archers with regular either-sex licences.
- Success rate varied from 24.2% in combined WMZ 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 to 61.7% in WMZ 9 and 10 combined for the antlerless licence holders.
- The regular either-sex harvest structure was 170 bucks/100 does/19 fawns.
- The antlerless harvest structure varied from 13-35 fawns/100 does (average 26/100).

B. POPULATION STATUS

1. Density Estimates

- Transect surveys were flown in the Great Sandhills (WMZ 9 and 10), and Cabri (WMZ 12) and Burstall (WMZ 11) sandhill complexes to derive population estimates (Table 50). Transects were flown one half mile apart with a Cessna 185 and 2 observers on the right side of the aircraft to reduce the number of animals missed. Deer within 1/8 mile of the transect line were counted (25% coverage).
- Population density for WMZ 9 represents a 14% increase whereas WMZ's 10, 11, and 12 were -28%, -64% and -41%, respectively, compared to 1984 estimates.
- Two stratified random block surveys were designed and flown in WMZ 6 in February 1986 to sample mule deer populations (Table 51). Data from these surveys will serve as a base line data for future comparison as these surveys are repeated in coming years.

2. Population Structure: Helicopter Aerial Survey

- Sixteen hundred mule deer were classified by sex and age class and antler configuration in the Cabri, Burstall, and Great Sandhill complexes during November and December 1985 (Table 52).

Table 50. Estimated Mule Deer Populations in Southwestern Saskatchewan 1985-86

Survey Block WMZ	Surveyed Area km^2 (mi^2)	Total Area km^2 (mi^2)	Deer Observed	Density/km^2	Estimated Winter Pop. 1985-86	Estimated Winter Pop. 1984-85	% Change
GREAT SANDHILLS (WMZ 9)							
Millie	46.9 (18.1)	172.2 (66.5)	227	4.8	827	607	
Elkink	7.5 (2.9)	28.2 (10.9)	52	6.9	195	293	
	54.4 (21.0)	200.4 (77.4)	279	5.9	1022	900	+14%
GREAT SANDHILLS (WMZ 10)							
Millie	20.7 (8.0)	82.1 (31.7)	108	5.2	427	619	
Elkink	27.7 (10.7)	111.6 (43.1)	171	6.2	692	1350	
Minor	65.5 (25.3)	269.9 (104.2)	457	7.0	1889	2432	
Yeast	33.9 (13.1)	140.9 (54.4)	483	14.2	2001	2465	
Heck Coop	13.0 (5.0)	47.7 (18.4)	85	6.5	310	460	
Signal Valley	20.2 (7.8)	83.4 (32.2)	78	3.9	325	364	
Lemsford	14.2 (5.5)	54.1 (20.9)	47	3.3	179	586	
Watson	43.8 (16.9)	173.8 (67.1)	297	6.8	1182	1480	
	239.0 (92.3)	963.5 (372.0)	1726	6.6	7005	9756	-28%
CABRI SANDHILLS (WMZ 12)	46.9 (18.1)	187.8 (72.5)	190	4.1	770	2160	-64%
BURSTAL SANDHILLS (WMZ 11)	35.7 (13.8)	142.5 (55.0)	161	4.5	641	1140	-41%

NOTE: Transect survey flown 1/2 mile apart with 2 observers on right side for 1/8 mile 100% coverage or 25% coverage on survey block.

Table 51. 1985-86 Southwest Drainage Mule Deer Population Surveys (Stratified Random Block Sampling)

SURVEY BLOCK	SURVEY AREA (km^2)	WMZ	BLOCK POP. EST. ± 80% CI	BLOCK POP. DENSITY ± 80% CI (Deer km^2)	PREVIOUS POP. EST. DEER/km^2 Year
Maple Creek	834	16	206 ± 73	0.15 ± 0.05	Val Marie 0.55 ± 0.83 (83-84)**
Eastend	1370	6	656 ± 164**	0.79 ± 0.20	Eastend 0.78 ± 0.37 (83-84)*

* Represents density data (deer/km^2) from a 922 km^2 (Eastend) and 1658 km^2 (Val Marie) survey block flown with a helicopter in 1983-84. Due to the low number of sample blocks flown, results (deer/km^2) should not be interpreted as conclusive.

** Strata A and B data was combined to arrive at a population estimate.

Table 52. Mule Deer Population Structure - Helicopter Observations Nov - Dec 1985

WMZ	NUMBER OF DEER: Yearling Males (%)	Teen Males (%)	Mature Males (%)	Does	Fawns	Total (n)	Males* / 100 Females	Fawns / 100 Females	% Does with Fawns: Single	Twins	Triplets
9	33 (28)	38 (32)	48 (40)	150	109	= 378	79	72	79	13	8
10	87 (41)	37 (17)	89 (42)	248	199	= 660	86	80	65	26	9
11	28 (50)	12 (21)	16 (29)	119	102	= 277	47	86	80	20	--
12	23 (37)	8 (13)	31 (50)	129	94	= 285	48	73	73	27	--

* Males - Yearling Males and Teen Males and unclassified males
Yearling males - Antler class A, B as per Cooperative Wildlife Management study
Teen males - Antler class C as per Cooperative Wildlife Management study
Mature males - Antler class D, E as per Cooperative Wildlife Management study.

- Buck:doe ratios were 1.5 times the 1984 levels in all zones surveyed except WMZ 12 where there was a slight decline from 51 males/100 females in 1984 to 48 males/100 females in 1985. The high buck to doe ratios in WMZ 9 and 10 are partially inflated due to the high antlerless harvest in the two zones in early November. These proportions also reflect good recruitment of yearling and teen males (approximately 60% of the male population) into the mature male age classes (40% of male population are mature animals) since the adoption of the antlerless harvest strategy. High recruitment of young males to the mature age classes is consistent with the strategy of providing Saskatchewan hunters opportunity to harvest mature bucks.
- For all zones surveyed fawns/100 does averaged 78 fawns /100 females in 1985 a small increase from 1984 levels (68 fawns/100 females) but still below 1983 levels (95 fawns/100 females). Thirty-one percent of all animals observed were fawns which suggests an acceptable proportion of young animals in the population for stabilized growth.

3. Population Structure: Co-operative Wildlife Management Study

- The mule deer population structure in the Grasslands (40 males/100 females/82 fawns) was representative of the provincial structure of 40 males/100 females/78 fawns (Table 53).
- Comparison of the population structure data derived from the late November helicopter surveys in WMZ 9, 10, 11, 12 (65 males/100 females/78 fawns) with co-operative wildlife data for the Grasslands (40 males/100 females/82 fawns) indicates a significant difference in the buck to doe ratio (Table 54). This difference is the result of the removal of does during the antlerless hunting season.
- Reproduction indices sex ratios indicate healthy populations of mule deer in the primary harvest zones.

C. 1986 MANAGEMENT OBJECTIVES

- Management objectives have been directed towards stabilization of mule deer populations at levels which insure population viability and optimum recreation sport hunting opportunity, while attempting to minimize depredation of agricultural produce.

Table 53. Mule Deer Population Structure - Province - Sept-Nov 1985
(Co-operative Wildlife Management Study Observations)

Eco Zone	NUMBER OF DEER Yearling Males (%)	Teen Males (%)	Mature Males(%)	Does	Fawns	Total Sample (n)	Males* / 100 Females	Fawns / 100 Females	% Does with Fawns Single	Twins	Triplets
GRASSLAND	207 (31)	173 (26)	287 (43)	1697	1389	= 3753	40	82	59	38	3
FARMLAND	79 (33)	67 (28)	92 (39)	639	454	= 1331	41	71	72	26	2
PARKLAND	4 (13)	13 (42)	14 (45)	94	51	= 176	33	54	59	41	0
FRINGE	1 (33)	0 (0)	2 (67)	7	9	= 19	43	129	17	83	0
FOREST	2 (40)	0 (0)	3 (60)	4	1	= 10	125	25	100	0	0
PROVINCE	293 (31)	253 (27)	398 (42)	2441	1904	= 5289	40	78	62	35	3

*Males = Yearling males and teen males and mature males and unclassified males.

Yearling Males = Antler Class A, B as per Cooperative Wildlife Management Study.
Teen Males = Antler Class C as per Cooperative Wildlife Management Study.
Mature Males = Antler Class D, E as per Cooperative Wildlife Management Study.

Table 54. Mule Deer Population Structure - Grasslands - Sept-Nov 1985
(Co-operative Wildlife Management Observations)

WMZ	NUMBER OF DEER						Males*	Fawns	% Does with Fawns		
	Yearling Males (%)	Teen Males (%)	Mature Males (%)	Does	Fawns	Total Sample (n)	100 Females	100 Females	Single	Twins	Triplets
1	12 (43)	9 (32)	7 (25)	85	84	= 197	38	99	78	22	0
2	26 (22)	43 (37)	47 (41)	313	252	= 681	38	81	52	44	5
3	1 (33)	2 (67)	0 (0)	18	16	= 37	17	89	0	100	0
4	24 (29)	25 (30)	34 (41)	232	143	= 458	36	62	46	53	2
5	8 (25)	10 (31)	14 (44)	83	53	= 168	35	64	96	4	0
6	19 (35)	13 (24)	23 (42)	136	108	= 299	40	79	54	44	3
7	6 (18)	5 (15)	22 (67)	130	85	= 248	26	65	68	30	2
8	9 (30)	8 (27)	13 (43)	54	65	= 149	56	120	40	44	16
9	14 (35)	11 (27)	15 (38)	56	60	= 156	73	107	39	52	9
10	20 (33)	9 (15)	32 (52)	79	58	= 198	77	73	83	17	0
11	3 (38)	2 (25)	3 (38)	20	22	= 50	40	110	63	38	0
12	7 (39)	3 (17)	8 (44)	46	40	= 104	39	87	56	44	0
13	21 (31)	12 (18)	35 (51)	209	209	= 486	33	100	57	39	4
14	37 (40)	21 (23)	34 (37)	236	194	= 522	39	82	61	38	1
TOTAL	207 (31)	173 (26)	287 (43)	1697	1389	= 3753	40	82	59	38	3

* Males = Yearling males and teen males and mature males and unclassified males/total females.

Yearling Males = Antler Class A, B as per Cooperative Wildlife Management Sudy.
Teen Males = Antler Class C as per Cooperative Wildlife Management Study.
Mature Males = Antler Class D, E as per Cooperative Wildlife Management Study.

- The population reduction observed in WMZ 9, 10, 11 and 12 was achieved through implementation of liberal antlerless quotas to put pressure on the reproductive segment of these populations and reduce the reproductive increment.
- Population models suggest that populations must continue to be reduced using an antlerless harvest if stable populations are to be maintained.
- Maintenance of high buck to doe ratios is also an objective in mule deer management in order to provide Saskatchewan hunters an opportunity to harvest mature male animals.

1. Regular season quotas will remain at 1985 levels in all primary mule deer zone with the exception of WMZ 11 where the proportion of mature bucks has increased to a level where this zone can once again support a restricted male harvest (Table 55). The quota for Zone 11 will be 50 regular licences.
2. An additional 150 regular licences (100-WMZ 1 to 8, 13, 14, 18 to 27, 19, 30, 45 and 46 and 50 - WMZ 9 and 10 combined) will be set aside for hunters using only muzzleloading rifles.
3. Quotas in all peripheral zones (WMZ 23 to 27, 29, 30, 45 and 46) will increase by 50 each.
4. Antlerless quotas will remain the same or have been reduced in most zones (Table 55). WMZ 4 and 19 are exceptions with 150 antlerless licences allocated for each zone.
5. Antlerless harvests will be maintained with a bag limit reduction to 1 animal per licence. Hunter success will increase with the reduction in bag limit thus expediting the harvest of the desired number of antlerless mule deer to maintain stable populations.
6. Antlerless quotas are not warranted in peripheral zones (WMZ 18, 23-27, 29, 45 & 46) where the harvest structure (214 males/100 females/20 fawns) suggest that adequate numbers of antlerless deer are being harvested.
7. An additional 150 antlerless licences will be allotted to hunters with muzzleloading rifles (100-WMZ 1 to 8, 13, 14, 18 to 27, 29, 30, 45 & 46 and 50 - WMZ 9 and 10 combined).

TABLE 55. Mule Deer Licence Quotas, 1984-86.

WMZ	1984			1985				1986					
	Regular Rifle Season		Archery	Regular Rifle Season		Archery Season		Regular Rifle Season		Archery Season		Muzzleloader Season	
	Either Sex (1 deer)	Antlerless (1 deer)	Season (1 deer)	Either Sex (1 deer)	Antlerless (2 deer)	Either Sex (1 deer)	Antlerless (2 deer)	Either sex (1 deer)	Anterless (1 deer)	Either Sex (1 deer)	Antlerless (1 deer)	Either Sex (1 deer)	Antlerless (1 deer)
1	100	—	*	100	75	*	*	100	75	*	*	*	*
2	900	1000	*	1000	1500	*	*	1000	1000	*	*	*	*
3	300	—	*	300	100	*	*	300	75	*	*	*	*
4	100	—	*	75	—	*	*	100	150	*	*	*	*
5	300	200	*	300	300	*	*	300	200	*	*	*	*
6	400	200	*	400	500	*	*	400	500	*	*	*	*
7	300	—	*	300	200	*	*	300	200	*	*	*	*
8	50	—	*	50	50	*	*	50	50	*	*	*	*
9	400	600	**	500	500	*	*	500	500	**	**	**	**
10	700	3000	**	800	3000	**	**	800	1200	**	**	**	**
11	—	200	—	—	450	—	—	50	100	—	—	—	—
12	150	200	50	150	500	50	50	150	300	50	50	*	*
13	400	400	*	400	800	*	*	400	800	*	*	*	*
14	600	600	*	600	1200	*	*	600	500	*	*	*	*
18	—	—	—	—	—	*	*	—	—	*	*	*	*
19	150	—	*	200	-	*	*	200	150	*	*	*	*
20	—	—	—	—	—	*	*	—	—	*	*	*	*
21	—	—	—	—	—	*	*	—	—	*	*	*	*
22	—	—	—	—	—	*	*	—	—	*	*	*	*
23	200	—	*	200	—	*	*	250	—	*	*	*	*
24	200	—	*	200	—	*	*	250	—	*	*	*	*
25	50	—	*	150	—	*	*	200	—	*	*	*	*
26	50	—	*	200	—	*	*	250	—	*	*	*	*
27	50	—	*	150	—	*	*	250	—	*	*	*	*
29	100	—	*	100	—	*	*	150	—	*	*	*	*
30	100	—	*	100	—	*	*	150	—	*	*	*	*
45	50	—	*	50	—	*	*	100	—	*	*	*	*
46	100	—	*	100	-	*	*	150	—	*	*	*	*
TOTAL	5750	6400	150** 600**	6425	9175	600* 150**	100* 150**	7000	5800	800* 150**	200* 150**	100* 50**	100* 50**
			800			800	300			950	400	150	150

* and ** represent combined zones.

8. In 1986 12-15 year old hunters will be allowed to apply for antlerless mule deer licences in the computerized draw. This change is the result of: a) requests from interest groups suggesting that antlerless mule deer represent an excellent way of introducing young people to the sport of hunting; b) lack of demand for the allotted numbers of antlerless mule deer licences during the past two years which has necessitated auxilary mechanisms for the allocation of these licences.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 MULE DEER HUNTING REGULATIONS.

ELK

A. REVIEW OF 1985 HUNTING SEASON

1. Licence Sales

	1981	1982	1983*	1984*	1985*
Regular (Bulls only)	2,774	3,020	3,187	3,698	3,240
Special	898	700	894	784	1,085
TOTAL	3,672	3,720	4,081	4,482	4,322

* Final (June 1) sale figures; however all data analysis on figures available March and projected to June 1.

2. Hunting Activity and Harvest

(a) Northern Commercial Forest

- With 2,863 active hunters the regular (antlered animals only) season elk harvest (excluding WMZ 53) decreased from 484 animals in 1984 to 240 animals in 1985 (Table 56).
- An additional 12 bulls, 15 cows and 8 calves were harvested in WMZ 53 around Prince Albert National Park. This is a special management season which was originally established to obtain hunting recreation from elk resident in the National Park and to assist depredation control in the surrounding farmland. The harvests have traditionally been less than 50 animals annually, with the 1984 harvest of 219 animals being an obvious exception. The 1985 season returned to normal with a total harvest of 35 animals and 1875 hunter-days of recreation.

Table 56. Regular Elk Harvest, Hunting Success and Pressure - Forest - 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: ELK TYPE OF LICENSE: REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	114	145	16	13.8	16	11.77	1	3.92	500	32	0.1976
49	188	239	8	4.2	8	7.84	1	0.00	841	107	0.3513
50	55	71	8	14.1	8	7.84	1	0.00	300	38	0.0900
53	382	486	35	9.2	35	0.75	1	0.50	1,875	53	0.6763
	739	941	67	9.0	67	2.50	1	0.75	3,516	53	0.3187
56	958	1,086	106	11.1	106	101.97	1	3.92	4,361	41	0.9226
57	315	357	27	8.7	27	27.45	1	0.00	1,292	47	0.390[illegible]
58	69	78	0	0.0	0	0.00	1	0.00	239	.	0.1056
59	173	196	24	13.6	24	23.53	1	0.00	596	25	0.1004
60	149	169	12	7.9	12	7.84	1	3.92	543	46	0.1387
61	121	137	4	3.2	4	3.92	1	0.00	377	96	0.1239
62	97	110	16	16.2	16	15.69	1	0.00	373	24	0.0841
63	125	141	12	9.4	12	11.77	1	0.00	488	42	0.0984
64	59	67	8	13.3	8	7.84	1	0.00	243	31	0.0682
66	24	27	0	0.0	0	0.00	1	0.00	116	.	0.0103
69	35	39	0	0.0	0	0.00	1	0.00	161	.	0.0207
	2,124	2,408	208	9.8	208	200.02	1	7.84	8,789	42	0.1593
Total	2,863	3,349	275	9.6	275				12,305	48.5	
Total (Less WMZ 53)	2,481	2,863	240	9.6	240				10,430	48.0	

- Hunter-days of recreation increased to 10,430 from 9,548 in 1984 (Table 56).
- Harvest during the December 2-7 late regular season was 71 compared to 142 in 1984 but recreation days remained relatively stable at 3336 (Table 57).
- Similar to previous years 68% of the recreation days and 70% of the harvest occurred during the early regular September 16-28 season (Table 57).
- Harvest structure in the special season in WMZ 48, 49, 56 and 57 combined was 44 bulls/100 cows/48 calves with 85 elk harvested.

(b) Special Seasons

i. Moose Mountain Park (WMZ 33) (Licence Quota = 100)
- A telephone survey resulted in a harvest estimate of 40 animals with a harvest structure of 167 bulls/100 cows/83 calves (Table 58).

ii. Fort a la Corne WMU (WMZ 50) (Licence Quota = 277)
- The estimated harvest was 54 elk based on the hunter questionnaire survey (Table 58).
- The harvest structure was 167 bulls/100 cows/33 calves

iii. Porcupine Provincial Forest (WMZ 48, 49, 56, 57) (Licence Quota = 500)
- The elk harvest was 85 animals compared with 92 in 1984 (Table 58).
- Hunter success was 19.5% based on the hunter questionnaire survey.
- Hunter-days/animal increased to 20 from 11 in 1984

iv. Cypress Hills East and Centre Blocks (WMZ 6 & 7) (Licence Quota = 100)
- Field checks or telephone contact of all hunters in these zones indicated that 38 elk were harvested in 1985 (Table 58) with a harvest structure of 183 bulls/100 cows/33 calves (Table 58).
- Hunter success was 38% with 86% of the bulls harvested in the mature (C class or better) age classes.

Table 57. Regular Season Elk Harvest, Hunting Success and Pressure By Season - 1985

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: ELK TYPE OF LICENSE: REGULAR LICENSE

WMZ	SEASON START	DATES END	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	09/16	09/28	72	98	8	10.9	8	7.84	1	0.00	286	37	0.1131
48	12/02	12/07	58	78	8	13.6	8	3.92	1	3.92	214	27	0.0845
49	09/16	09/28	101	137	4	3.9	4	3.92	1	0.00	506	129	0.2112
49	12/02	12/07	89	122	4	4.4	4	3.92	1	0.00	335	86	0.1400
50	09/16	09/28	35	47	8	22.7	8	7.84	1	0.00	171	22	0.0512
50	12/02	12/07	29	39	0	0.0	0	0.00	1	0.00	129	.	0.0388
53	11/04	12/14	357	486	35	9.9	35	0.75	1	0.50	1,875	53	0.6763
56	09/16	09/28	599	780	71	11.8	71	66.67	1	3.92	2,704	38	0.5721
56	12/02	12/07	400	522	35	8.8	35	35.30	1	0.00	1,657	47	0.3505
57	09/16	09/28	214	278	20	9.2	20	19.61	1	0.00	929	47	0.2810
57	12/02	12/07	102	133	8	7.7	8	7.84	1	0.00	363	46	0.1097
58	09/16	09/28	57	75	0	0.0	0	0.00	1	0.00	233	.	0.1039
58	12/02	12/07	6	8	0	0.0	0	0.00	1	0.00	6	.	0.0026
59	09/16	09/28	132	173	20	14.8	20	19.61	1	0.00	498	25	0.0839
59	12/02	12/07	39	51	4	10.0	4	3.92	1	0.00	98	25	0.0165
60	09/16	09/28	123	161	12	9.5	12	7.84	1	3.92	520	44	0.1327
60	12/02	12/07	6	8	0	0.0	0	0.00	1	0.00	24	.	0.0060
61	09/16	09/28	99	129	4	4.0	4	3.92	1	0.00	349	89	0.1148
61	12/02	12/07	9	12	0	0.0	0	0.00	1	0.00	27	.	0.0090
62	09/16	09/28	57	75	12	20.6	12	11.77	1	0.00	255	22	0.0575
62	12/02	12/07	39	51	4	10.0	4	3.92	1	0.00	118	30	0.0265
63	09/16	09/28	60	78	8	13.0	8	7.84	1	0.00	286	37	0.0577
63	12/02	12/07	63	82	4	6.2	4	3.92	1	0.00	202	52	0.0407
64	09/16	09/28	33	43	4	11.9	4	3.92	1	0.00	176	45	0.0495
64	12/02	12/07	30	39	4	13.0	4	3.92	1	0.00	67	17	0.0187
66	09/16	09/28	6	8	0	0.0	0	0.00	1	0.00	55	.	0.0049
66	12/02	12/07	15	20	0	0.0	0	0.00	1	0.00	61	.	0.0054
69	09/16	09/28	27	35	0	0.0	0	0.00	1	0.00	126	.	0.0162
69	12/02	12/07	6	8	0	0.0	0	0.00	1	0.00	35	.	0.0046

Table 58. Special Season Hunter Questionnaire Elk Harvest Data, 1985

WMZ	QUOTA	ACTIVE HUNTERS	HARVEST	SUCCESS	HARVEST STRUCTURE BULLS/100 COWS/CALF	HUNTER DAYS	HUNTER DAYS/KILL
6 & 7	100		38	38	183/100/33		
7a	100	98	32	32.5	160/100/13	405	13
7b*	107		25	23.4	200/100/57		
33a	100	100	32	32.3	167/100/83	365	11
33b*	100	103	40	39.0	140/100/27		8.7
50	300	263	54	20.7	167/100/33	1564	29
56	500	433	85	19.5	44/100/52	1684	20

* Telephone survey and/or field check data.

v. Cypress Hills West Block (WMZ 7) (Licence Quota = 107)

- Field checks or telephone contact of all hunters in these zones indicated that 25 elk were harvested in Saskatchewan during 1985 sport hunting season.
- Hunter success was 23% with a harvest structure of 200 bulls/100 cows/57 calves.
- Approximately 71% of the bulls harvested were "C" class or better indicating mature animals.
- An additional 50 (63 bulls/100 cows/46 calves) and 56 (207 bulls/100 cows/53 calves) elk were harvested by native hunters and Alberta sport hunters respectively.

B. POPULATION STATUS

1. Density Surveys
   - Population estimate surveys were not conducted for elk in the northern commercial forest zones during the 1985-86 winter.
2. Population Structure: Aerial Surveys
   - Sex and age surveys were conducted with fixed-wing aircraft in February 1986 in the eastern Forest and Forest Fringe zones. The elk population was widely dispersed and group sizes were small in typical late winter fashion and were difficult to locate.
   - Calves/100 females varied from 33/100 in WMZ 61 to 67/100 in WMZ 60 (Table 59).
   - Males/100 females varied from 9/100 in WMZ 56 and 57 combined to 124/100 in WMZ 61 (Table 59). Bulls form solitary bachelor groups and remain separate from the cow/calf groups during the winter. Due to the solitary nature of these bachelor herds, bulls are more difficult to locate during late winter surveys. Consequently low proportions of males to cows may reflect differential observability. If the proportions of bulls to cows are unbiased due to the observability problem then these numbers may suggest a lack of mature bulls in the population.

Table 59. 1984-86 Elk Population Structures

ANIMALS OBSERVED 1985-86						1986*		1985		1984**	
WMZ AREA	YLG BULLS	MATURE BULLS	COWS	CALVES	TOTAL ANIMALS (N)	BULLS / 100 COWS	CALVES / 100 COWS	BULLS / 100 COWS	CALVES / 100 COWS	BULLS / 100 COWS	CALVES / 100 COWS
49	—	—	—	—	—	—	—	8	37	11	51
56	18	5	243	106	= 372***	9	44	11	46	24	50
57			1					21	28	11	42
59	3	—	9	6	= 18	33	67	16	47	N/A	N/A
60	—	—	26	13	= 39	—	50	—	—	50	61
61	11	15	21	7	= 54	124	33	36	32	29	47
TOTAL	32	20	299	132	= 483	17	44	16	38	21	48

* Fixed-Winged Aircraft
** R-22 Helicopter
*** Observed data is combined for zones 56 and 57 in 1985-86

3. Southern WMZ: Population Status

a. Moose Mountain Park (WMZ 33)

- the population estimate was 521 elk ±21% in 1986 compared to 315 ± 44% in 1985 and 463 ± 40% in 1984. The 1986 survey represents a good estimate with acceptable confidence whereas the 1985 and 1984 estimates are less satisfactory due to the high variance and wide confidence intervals.

b. Fort a la Corne (WMZ 50)

- No survey conducted in 1985.

c. Cypress Hills (WMZ 6 & 7)

- Surveys recorded 168 animals wintering in the Center and East Blocks with a herd structure of 30 bulls/100 cows/55 calves. Mature bulls were difficult to detect with survey techniques due to their solitary behavior.
- Surveys conducted by Alberta indicate a West Block population of approximately 778 animals, an 18% increase over the 1984-85 winter estimates of 672 elk.

d. Thickwood Hills (WMZ 54)

- It is estimated that there are presently in excess of 200 elk in the Thickwood Hills. This represents a 100% increase from 1982 at which time the population was estimated to be 100 animals following a release of 35 animals.

C. 1986 MANAGEMENT OBJECTIVES

1. The Porcupine Forest (WMZ 48, 49, 56 and 57) accounts for 70% of the provincial regular elk hunting recreation days, 1/3 of which occur in the late season. The low bull/cow ratio observed in the herd suggests that an over-harvest of mature bulls may have occurred. A reduction in the harvest of mature bulls could be achieved through a variety of options. The late regular season will be closed in an effort to eliminate a portion of the bull harvest, reduce landowner-hunter conflicts in WMZ 56, and still provide hunters with a calling season. In both 1984 and 1985, 24% of the bull harvest occurred in the late regular season (Table 60). If overharvest of mature bulls continues to be a problem it may be necessary to restrict early regular season hunting pressure during the rut when mature bulls are most vulnerable.

Table 60. Comparison of 1984-85 male harvest structure in the Early bulls-only, late bulls-only, and special season in WMZ 48, 49, 56, 57 based on antler configuration data from check stations.

ANTLER CLASS	REGULAR 1984 EARLY	LATE	SPECIAL	TOTAL	REGULAR 1985 EARLY	LATE	SPECIAL	TOTAL
A	10	6	0	16(19%)	11	10	9	29(37%)
B	4	2	0	6(7%)	1	0	2	3(4%)
C	4	2	2	8(10%)	9	2	3	14(18%)
D	20	4	1	25(30%)	13	4	0	17(22%)
E	11	3	0	14(17%)	9	1	0	10(13%)
F	11	3	0	14(17%)	3	2	0	5(6%)
TOTAL	60(72%)	20(24%)	3(4%)	83	46(59%)	19(24%)	14(18%)	78

* 24 cows/13 calves and 20 cows/9 calves from the WMZ's in question were checked during the 1984 and 1985 Special Seasons respectively.

2. The WMZ 53 season was originally introduced to provide recreation and assist with depredation control. Most of the recreation and harvest occurs during the last three weeks of this season. The season will be reduced to 3 weeks to maintain recreation but reduce landowner/hunter conflicts which occur in the 6 week extended season.

3. Southern Areas:

a. Moose Mountain Park (WMZ 33):

- The 1986 population estimates suggest a stable population and the quota will be maintained at 100 licences.

b. Fort a la Corne (WMZ 33):

- The current quota of 100 licences will be maintained for 1986.

c. Porcupine Provincial Forest (WMZ 48, 49, 56, 57):

- The current quota of 500 licences will be maintained for 1986.

d. Cypress Hills West Block (WMZ 6 and 7)

- Populations estimates suggest a growing population and the licence quota will be increased to 200 in 1986.

e. Cypress Hills Centre and East Blocks (WMZ 6 and 7):

- The current quota of 100 licences will be maintained in 1986 to provide hunting opportunity and assist with depredation.

f. Thickwood Hills (WMZ 54)

- The elk population is growing steadily as a result of a 1982 elk transplant in the area. The objective of the transplant was to enhance the existing population to be able to provide hunting recreation. In accordance with this objective a licence quota of 50 will be available in 1986.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 ELK HUNTING REGULATIONS.

PRONGHORN ANTELOPE

A. REVIEW OF 1985 HUNTING SEASON

- Total licence sales were 3,181 in 1985, with 2,977 active hunters (rifle and archery) harvesting 1,718 antelope compared to 2,031 in 1984 (Table 61).
- Antelope hunters were afield for 5,596 days in 1985, 30% above 1984.
- Harvest structure was 195 bucks/100 does/17 kids.
- Rifle hunter success of 64% (Table 62) was 18% lower than in 1984 requiring 3 hunter days/animal. The harvest structure for rifle hunters only was 204 bucks/100 does/18 kids for the primary zones and 112 bucks/100 does/3 kids in the periferial zones.
- A total of 260 archery licences were sold with 209 active archery hunters killing 24 antelope for a 11.5% success rate (Table 63). The harvest structure of archer-killed antelope was 223 bucks/100 does/33 kids and an average 34 days/kill was required (Table 61). Success rates declined 50% from 1984.
- Statistical analysis of the antelope harvest data illistrates a significant reduction in the harvest and hunter success ratios from past years. At this time, it is believed that the new questionnaire format for acquiring harvest data and an increase in reporting rates from active but unsuccessful hunters is responsible for the difference.

B. POPULATION STATUS

- The July 1985 aerial survey revealed a provincial prehunt antelope density of 0.47/km^2 from 1984 (Table 64). The estimated provincial population of 11,000 is similar to 1984, however fluctuations in some zone populations were evident. Any changes in zone populations were assessed on a density (per unit area) basis in light of the revisions in survey block location for 1984. As the survey blocks normally flown were changed, population comparisons could not be made from 1984-85; consequently, density ratings had to be established to estimate zone populations.
- Although the 1985 provincial kid:doe ratio of 0.63 declined slightly from the long term average of 0.71, the ratio was 12% higher than in 1984 (Table 65).

Table 61. Provincial Antelope Harvest, Hunting Success & Pressure 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

FOR THE 1985 HUNTING YEAR

SUMMARY TOTALS FOR SPECIES: ANTELOPE

EZONE	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
GRASS	2,794	2,811	1,603	57.4	1,603	2.04	1	0.18	5,254	3	0.0811
FARM	183	195	115	62.6	115	1.11	1	0.03	341	3	0.0113
PARK	0	0	0	0.0	0	0.00	1	0.00	0	.	.
FRINGE	0	0	0	0.0	0	0.00	1	0.00	0	.	.
FOREST	0	0	0	0.0	0	0.00	1	0.00	0	.	.
SHIELD	0	0	0	0.0	0	0.00	1	0.00	0	.	.
TOTAL	2,977	3,006	1,717	57.7	1,717	1.95	1	0.17	5,595	3	0.0589

Table 62. Regular Season Antelope Harvest, Hunting Success & Pressure 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: ANTELOPE

TYPE OF LICENSE: 1ST REGULAR LICENSE (DRAW)

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	49	49	21	43.5	21	1.00	1	0.00	96	5	0.0116
2	563	563	358	63.6	358	2.11	1	0.10	975	3	0.0916
3	566	566	369	65.2	369	2.86	1	0.39	937	3	0.2180
4	94	94	53	56.5	53	2.00	1	0.25	171	3	0.0210
5	129	129	55	42.3	55	0.87	1	0.19	269	5	0.0450
6	47	47	30	62.9	30	21.00	1	0.00	78	3	0.0186
7	191	191	100	52.4	100	2.25	1	0.13	352	4	0.1859
8	145	145	100	68.8	100	1.77	1	0.23	254	3	0.0748
9	346	346	215	62.0	215	1.63	1	0.06	622	3	0.1811
10	99	99	69	70.0	69	6.00	1	0.00	175	3	0.0493
12	187	187	115	61.6	115	2.24	1	0.43	331	3	0.9633
14	186	186	98	52.9	98	0.70	1	0.10	324	3	0.0580
	2,602	2,602	1,583	60.8	1,583	2.04	1	0.18	4,583	3	0.0707

ECOLOGICAL DIVISION: FARMLAND

SPECIES: ANTELOPE

TYPE OF LICENSE: 1ST REGULAR LICENSE (DRAW)

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
19	15	15	8	50.0	8	0.00	1	0.00	27	4	0.0029
24	49	49	32	65.7	32	1.09	1	0.00	84	3	0.0174
25	52	52	38	73.5	38	2.00	1	0.13	69	2	0.0118
26	50	50	33	66.7	33	1.00	1	0.00	79	2	0.0175
	166	166	111	67.0	111	1.12	1	0.03	259	2	0.0086

Table 63. Archery Season Antelope Harvest, Hunter Success & Pressure 1985

ECOLOGICAL DIVISION: GRASSLAND

SPECIES: ANTELOPE TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
1	12	13	2	15.6	2	0.00	1	0.00	35	19	0.0041
2	23	25	2	7.8	2	1.82	1	0.00	108	60	0.0102
3	12	13	2	15.6	2	1.82	1	0.00	41	23	0.0095
4	10	11	2	18.2	2	1.82	1	0.00	14	8	0.0017
5	8	9	0	0.0	0	0.00	1	0.00	16	.	0.0027
6	5	5	0	0.0	0	0.00	1	0.00	13	.	0.0030
8	3	4	0	0.0	0	0.00	1	0.00	5	.	0.0016
9	20	22	4	18.2	4	3.63	1	0.00	75	21	0.0220
10	30	33	2	6.1	2	0.00	1	0.00	114	63	0.0321
11	8	9	4	43.6	4	1.82	1	1.82	28	8	0.0288
12	5	5	0	0.0	0	0.00	1	0.00	20	.	0.0581
13	35	38	4	10.4	4	1.00	1	0.00	134	37	0.0329
14	20	22	0	0.0	0	0.00	1	0.00	67	.	0.0121
	192	209	20	10.4	20	2.33	1	0.33	671	34	0.0104

ECOLOGICAL DIVISION: FARMLAND

SPECIES: ANTELOPE TYPE OF LICENSE: 1ST ARCHERY LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
19	3	5	0	0.0	0	0.00	1	0.00	10	.	0.0011
23	5	9	0	0.0	0	0.00	1	0.00	25	.	0.0044
24	1	2	0	0.0	0	0.00	1	0.00	5	.	0.0009
25	7	11	4	55.7	4	1.00	1	0.00	34	9	0.0058
26	1	2	0	0.0	0	0.00	1	0.00	9	.	0.0020
	17	29	4	20.9	4	1.00	1	0.00	83	23	0.0027

Table 64. Antelope Aerial Survey Population Densities and Herd Structures, July 1985.

The 1985 antelope survey was conducted July 2-7 and covered 7534 km^2 in Wildlife Management Zones 1-3, 6-12 and 26. The survey blocks were realigned this year to correspond to the new Wildlife Management Zone boundaries resulting in slightly more coverage than in 1984. The estimated provincial population of 11,000 is similar to last year; however fluctuations in some zone populations were evident. Results of the 1985 survey are as follows:

WMZ	AREA (km^2) SURVEYED	ANTELOPE OBSERVED	KIDS/ 100 DOES	DENSITY (km^2) 1985	1984	% CHANGE* FROM 1984
1	342	21	25	.06	N/A	
2	1989	1204	58	.60	.54	+11%
3	1282	969	63	.76	.53	+43%
6	630	108	61	.17	.16	+6%
7	557	297	54	.53	.56	-5%
8	544	178	66	.33	.32	+3%
9	793	298	68	.33	.48	-21%
10	606	236	73	.39	.47	-17%
11	326	143	105	.44	.50	-12%
12	185	60	81	.32	.37	-13.5%
26	280	48	64	.17	.20	-15%
	7534	3562	63	.47	.46	+2%

N/A - Not Surveyed

*NOTE: Changes in zone populations were assessed on a density (per unit area) basis in light of the revisions in survey block location for 1985.

Table 65. Antelope Kid:Doe Ratios From July Aerial Surveys, 1981-1986.

WMZ	1981	1982	1983	1984	1985	1986
1	.71	.76	.50	N/A	.25	---
2	.63	.46	.86	.52	.58	0.83
3,7,8	.71	.51	.59	.51	.61	0.88*
6	.53	.12	2.10	.44	.61	---
9,10	.86	.50	.88	.71	.70	0.78**
11-14	.61	.76	1.22	.60	.97	---
19,22, 24,29	.56	.77	---	---	---	---
26	.80	.48	.68	.63	.64	---
Average	.69	.51	.85	.56	.63	0.84

Provincial Kid:Doe Ratio from July aerial surveys, 1965-1980:

1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
.54:1	.85:1	.82:1	.74:1	.87:1	.77:1	.70:1	.60:1	.68:1	.56:1

1975	1976	1977	1978	1979	1980
.64:1	.81:1	.65:1	.74:1	.90:1	.68:1

* Represents kid:doe ratio from WMZ 3 only.
** Represents kid:doe ratio from 1 survey block in WMZ 9 only.

- The 1986 antelope survey was flown July 2-6 and consisted of 3 traditional survey blocks in WMZ 2, 1 block in WMZ 3, and 1 block in WMZ 9. The 1986 survey area of 3,691 km^2 was a 52% reduction from the previous survey, reflecting a decision to redirect a portion of the annual aerial survey effort to other big game species. Based on a comparison of those areas flown in both years, the overall 1986 survey block density is 14% higher than in 1985 (Table 66). Assuming this relationship holds to some extent for the remainder of the antelope range, the provincial antelope population in all likelihood exceeds 12,000 animals.

- Higher numbers of antelope observed on the survey blocks in 1986 was largely the result of increased numbers of kids (45% higher than 1985) and total bucks including yearlings (20% higher); the number of does observed was similar in both years. Reproductive success as demonstrated by the kid:doe ratio was excellent in 1986 (0.84), substantially higher than in drought-stricken 1985 (0.63) and than the long-term average of 0.67 kids:100 does. Excellent reproduction was anticipated following the moderate 1985-86 winter and ideal spring fawning conditions occurred with no severe weather to reduce fawn survival. Adequate spring and summer rainfall resulted in good to excellent range condition throughout southwestern Saskatchewan.

- Of particular interest is the variation of kid:mature doe (+2.5 years) ratios between 1983 and 1986 (Table 67). If yearling females (using the procedure of identifying yearling bucks and assuming the same number of yearling females) are excluded the ratio of 1.05 kids:doe in 1983 declined dramatically in 1984 (0.93 kids:doe) and 1985 (0.83 kids:doe) and then rebounded in 1986 (1.11 kids:doe) under ideal spring fawning conditions. These ratios would suggest that the 1984 and 1985 summer droughts in southwestern Saskatchewan had a major impact on productivity and partially account for overall kid:doe ratios being below the long term average.

Table 66. Antelope Aerial Survey Population Densities and Herd Structures, July 1986

The 1986 antelope survey was conducted July 2-6 and covered 3,691 km^2 in Wildlife Management Zones 2, 3 and 9 (1 survey block only). This was a 52% deduction from the 1985 survey effort.

WMZ	Area (km^2) Surveyed	Antelope Observed	Kids/100 Does	Density (km^2) 1986	1985		% Change* 1986 vs 1985
2	1989	1449	83	.72	.60		+20%
3	1282	897	88	.69	.76		-9%
9	420	345	78	.18	.41	**	+100%
	3691	2691	84	.73	.61		+14%

* % change based on density comparison
** 1985 density adjusted to represent similar area flown in 1986.

Table 67. Antelope Kid:Mature Doe (+2.5 yrs) Ratios from July Aerial Surveys, 1983-1986

	Yearling Males	Adult Males	Yearling Females	Adult Females	Kids	Kids:Mature Does*
1983	90	165	90	467	492	1.05
1984	211	190	211	502	465	0.93
1985	95	164	95	476	394	0.83
1986	53	78	53	221	186	1.11

* Based on mean number of animals for specific age class. Raw data unavailable for 1983 to 1985. If we use raw data for 1986 the kid:ratio is still 1.11. Data from only those survey blocks where yearling males were segregated by observers.

C. 1986 MANAGEMENT OBJECTIVES

- The 1986 antelope regular hunting season will be held October 29 to November 5, inclusive, in WMZ 1-14, 19, and 23-26. The total licence quota of 2975 is an increase of 25 licences from 1985, following combination of WMZ 2 and 5 quotas and some individual zone quota adjustments (Table 68). After the 1985 season when harsh weather resulted in most WMZ 5 antelope moving from the zone prior to the hunt and subsequent low hunter success, combination of the WMZ 5 and 2 quotas was deemed appropriate. Uncertainty related to the effect of this combination on the potential harvest of the WMZ 5 antelope population dictated a quota of 750 licences similar to the 1985 level (150 in WMZ 5, 600 in WMZ 2) in spite of higher WMZ 2 density figures in 1986. With much of the large increase in the WMZ 9 density probably due to animal redistribution, the quota was only increased 50 licences to 400. Reports of continued good populations and increasing depredation in WMZ 10 warranted an increase to 125 licences from 100 in 1985. WMZ 23 has been added to the area to be hunted in 1986, with this zone considered in combination with WMZ 19 (quota of 50) to the south.

- The quota for antelope archery licences remains at 300 with WMZ 15 and 18 newly opened to archers in 1986.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 ANTELOPE HUNTING REGULATIONS.

Table 68. Antelope Licence Quotas, 1985 and 1986

WMZ	Regular 1986	Regular 1985	Archery 1986	Archery 1985
1	50	50		
2 + 5	750	2(600)		
-	-	5(150)		
3	600	600	WMZ's	WMZ's
4	50	100	1-15,18,19	1-14,19
6	50	50	23-26	23-26
7	200	200	(300)	(300)
8 + 11	150	150		
9	400	350		
10	125	100		
12 + 13	200	200		
14	200	200		
19 + 23	50	50		
24	50	50		
25	50	50		
26	50	50		
Total	2975	2950	300	300

BLACK BEAR

A. REVIEW OF 1985 HUNTING SEASON

1. Licence Sales
   - Total licence sales were 4,392* compared to 4,899 in 1984.
   - There were 344 second bear licences issued in 1985 compared to 529 in 1984.
   - In addition, 3,142 free bear permits valid for WMZ 58-61 for the fall bear season were obtained by 1,571 hunters.
   - *Final (June 1) sales figures; however all data analysis based on figures available in March and projected to June 1.
2. Hunting/Harvest
   - The provincial harvest was 1,039 animals compared to 1,778 recorded in 1984 for first, second and free licence holders (Tables 69 - 73).
   - Hunter success was 26% for first licence hunters and 16% for second licence holders compared to 43% and 56%, respectively, in 1984. For the free tags hunter success is 9%.
   - Bear hunting supplied 20,923 hunter-days of recreation compared to 10,189 in 1984 with 70% of the harvest occurring in the spring season.
   - The provincial harvest structure was 262 boars/100 sows/19 cubs (Table 69).

B. POPULATION STATUS

- Field reports suggest the bear population remains very high, particularly along the Forest Fringe.

C. 1986 MANAGEMENT OBJECTIVES

1. In agricultural Saskatchewan, bear numbers continue to increase as does the bear's role as a pest. The bear's protected status in southern Saskatchewan was removed in 1985 to help control bear numbers and reduce depredation problems. **In Wildlife Management Zones 1 to 36, 38 - 41, and 44 to 47, bears may be hunted at any time of year without a licence.**

Table 69. Provincial Bear Harvest, 1985.

EZONE	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
GRASS	0	0	0	0.0	0	0.00	1	0.00	0	.	.
FARM	0	0	0	0.0	0	0.00	1	0.00	0	.	.
PARK	172	190	51	29.9	51	1.50	1	0.00	705	14	0.0278
FRINGE	740	839	208	28.1	208	5.43	1	0.33	3,421	16	0.1467
FOREST	4,169	4,524	764	18.3	764	2.26	1	0.19	16,606	22	0.1005
SHIELD	43	46	15	35.9	15	15.40	1	0.00	190	12	0.0010
TOTAL	5,123	5,599	1,039	20.3	1,039	2.62	1	0.19	20,922	20	0.0529

Table 70.. Parkland, Forest Fringe and Northern Shield 1st Regular Bear Licence Harvest, 1985.

ECOLOGICAL DIVISION: PARKLAND

SPECIES: BEAR — TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
37	97	108	36	36.9	36	1.33	1	0.00	454	13	0.0401
42	19	21	10	55.4	10	10.27	1	0.00	82	8	0.0111
43	56	62	5	9.2	5	0.00	1	0.00	169	33	0.0256
	172	190	51	29.9	51	1.50	1	0.00	705	14	0.0278

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: BEAR — TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	90	103	15	17.1	15	2.00	1	0.00	291	19	0.1148
49	58	67	26	44.0	26	1.50	1	0.00	350	14	0.1462
50	211	241	62	29.2	62	10.00	1	1.00	980	16	0.2940
51	18	21	5	28.6	5	5.13	1	0.00	82	16	0.0288
53	162	185	56	34.9	56	9.00	1	1.00	811	14	0.2926
54	58	67	21	35.2	21	20.53	1	0.00	303	15	0.0532
55	94	108	15	16.3	15	2.00	1	0.00	316	21	0.0843
	691	790	200	29.0	200	5.17	1	0.33	3,133	16	0.1194

ECOLOGICAL DIVISION: NORTHERN SHIELD

SPECIES: BEAR — TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
74	14	15	5	35.9	5	5.13	1	0.00	92	18	0.0020
75	24	26	5	21.5	5	5.13	1	0.00	92	18	0.0016
76	5	5	5	100.0	5	5.13	1	0.00	5	1	0.0001
	43	46	15	35.9	15	15.40	1	0.00	190	12	0.0010

Table 71. Forest 1st Regular Bear Licence Harvest, 1985.

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
56	597	647	154	25.8	154	1.27	1	0.45	2,436	16	0.5152
57	256	277	72	28.1	72	6.00	1	0.00	922	13	0.2787
58	99	108	5	5.2	5	5.13	1	0.00	336	66	0.1498
59	232	252	41	17.7	41	7.00	1	0.00	787	19	0.1326
60	147	159	36	24.5	36	1.33	1	0.00	652	18	0.1666
61	62	67	10	16.7	10	10.27	1	0.00	218	21	0.0718
62	52	56	15	29.5	15	15.40	1	0.00	350	23	0.0789
63	128	139	26	20.1	26	4.00	1	0.00	543	21	0.1093
64	62	67	15	25.0	15	15.40	1	0.00	278	18	0.0779
65	19	21	10	54.2	10	1.00	1	0.00	57	6	0.0088
66	128	139	21	16.0	21	1.00	1	0.00	491	24	0.0435
67	365	395	92	25.3	98	3.00	1	0.75	1,925	20	0.2219
68	95	103	21	21.7	21	20.53	1	0.00	362	18	0.0872
69	118	128	46	39.0	46	0.80	1	0.00	404	9	0.0522
70	24	26	5	21.7	5	5.13	1	0.00	87	17	0.0103
71	24	26	5	21.7	5	5.13	1	0.00	62	12	0.0034
72	38	41	10	27.1	10	1.00	1	0.00	157	15	0.0085
73	47	51	10	21.7	10	1.00	1	0.00	257	25	0.0056
	2,492	2,700	595	23.9	601	2.41	1	0.25	10,324	17	0.0625

Table 72. Forest Fringe and Forest 2nd Regular Bear Licence Harvest, 1985.

ECOLOGICAL DIVISION: FOREST FRINGE

SPECIES: BEAR TYPE OF LICENSE: 2ND REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
48	8	8	0	0.0	0	0.00	1	0.00	24	.	0.0096
50	16	16	0	0.0	0	0.00	1	0.00	154	.	0.0462
53	16	16	0	0.0	0	0.00	1	0.00	53	.	0.0193
54	8	8	8	100.0	8	8.11	1	0.00	57	7	0.0100
	49	49	8	16.7	8	8.11	1	0.00	289	36	0.0110

ECOLOGICAL DIVISION: FOREST

SPECIES: BEAR TYPE OF LICENSE: 2ND REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
56	32	32	0	0.0	0	0.00	1	0.00	94	.	0.0199
57	8	8	0	0.0	0	0.00	1	0.00	41	.	0.0123
58	8	8	0	0.0	0	0.00	1	0.00	32	.	0.0144
60	8	8	0	0.0	0	0.00	1	0.00	28	.	0.0072
62	8	8	8	100.0	8	0.00	1	0.00	49	6	0.0110
63	8	8	8	100.0	8	8.11	1	0.00	16	2	0.0033
64	8	8	0	0.0	0	0.00	1	0.00	57	.	0.0159
67	16	16	0	0.0	0	0.00	1	0.00	65	.	0.0075
68	8	8	0	0.0	0	0.00	1	0.00	21	.	0.0051
	105	105	16	15.4	16	1.00	1	0.00	403	25	0.0024

Table 73. Free Bear Licence Harvest, 1985.

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
58	314	344	49	15.6	49	1.00	1	0.00	871	18	0.3882
59	786	859	49	6.3	49	1.00	1	0.00	2,958	60	0.4984
60	135	147	0	0.0	0	0.00	1	0.00	491	.	0.1254
61	314	344	49	15.6	49	49.09	1	0.00	1,387	28	0.4562
63	22	25	0	0.0	0	0.00	1	0.00	172	.	0.0346
	1,571	1,718	147	9.4	147	2.00	1	0.00	5,879	40	0.0374

For the 1986 fall hunting season bear licences will be required for Zone 37 to alleviate enforcement problems encountered as a result of significant bear hunting being prevented around Duck Mountain Provincial Park during the archery and white-tailed deer season. By licencing bear hunters, they will be able to hunt during this period whereas they were unable to do so when a licence was not required to hunt in WMZ 37.

2. Bears are serious predators of neonatal moose calves in WMZ's 58-61. Calf mortality due to black bears has been well documented and exceeds 50% in some areas, severely limiting population growth and harvest of moose. Moose calf recruitment is similarly low in a number of other WMZ's, but the significance of black bear predation has not yet been documented. **Bear hunting regulations permit the harvest of one bear per licence (maximum two licences/hunters) during the spring season in WMZ 42, 43, 48-76. To encourage additional bear hunting, a person hunting bear in WMZ 58-61 during the spring season may obtain two free bear seals (limit one bear either-sex/seal) with each valid bear licence. During the fall season, each holder of a valid big game licence in WMZ 58-61 may also receive two free bear seals (maximum of two seals/hunter) for the months of August-October, inclusive.**

SUMMARY: APPENDIX 6 OUTLINES THE 1986 BEAR HUNTING REGULATIONS.

WOODLAND CARIBOU

A. REVIEW OF 1985 HUNTING SEASON

- Licence sales have ranged between 135 and 280 in the past 9 years; 1985 licence sales were 152 with 125 active hunters.
- The projected harvest was 24 animals compared to 23 in 1984 and 27 animals in 1983. (Table 74).
- Hunter success was 19% and caribou hunters spent 420 days afield.

B. POPULATION STATUS

- Concern for caribou populations stems from forestry road development and forest harvest practices which not only remove habitat but also allow sport and Indian hunters easier access to the caribou.
- Hunter pressure is very light but evidence exists to suggest that hunter pressure may be eliminating or greatly reducing local herds.
- During the 1985-86 winter, aerial surveys were designed and flown in an attempt to estimate caribou densities. Data collected from the 2420 km^2 Weyakwin study area suggested that caribou densities were 1 caribou/45 km^2 (0.02 caribou/km^2). These densities are significantly lower than the 0.14 caribou/km^2 reported from the Dore Lake area in 1960.

C. 1986 MANAGEMENT OBJECTIVES

- Based on aerial surveys and sighting reports serious consideration was given to closing the entire Woodland Caribou season for 1986. The department will however, close only WMZ's 58, 59, 61 to 66 and 69, including Nipawin Provincial Park, in order to accommodate the northern outfitters who have already booked clients for the 1986 season and provide resident hunters with an alternative hunting opportunity. In view of the low densities, however, a complete closure of all zones in 1987 appears warranted until caribou populations improve significantly.
- For 1986 WMZ's 70 to 75, including Lac La Ronge Provincial Park, will remain open from September 8 to September 20, October 6 to October 18 and November 3 to December 6 (one woodland caribou, either sex).

Table 74. Caribou Harvest Hunting Success and Pressure 1985

RR3320-2 PROJECTED TABLES

PARKS AND RENEWABLE RESOURCES

BIG GAME SURVEY ANALYSIS

BY SPECIES AND TYPE OF LICENSE

FOR THE 1985 HUNTING YEAR

ECOLOGICAL DIVISION: FOREST

SPECIES: WOODLAND CARIBOU

TYPE OF LICENSE: 1ST REGULAR LICENSE

WMZ	# ACTUAL HUNTERS	# ZONE HUNTERS	# SUCCESSFUL HUNTERS	% HUNTER SUCCESS	HARVEST	HARVEST STRUCTURE MALES	FEMALES	YOUNG	HUNTER DAYS	HUNTER DAYS/ ANIMAL	HUNTER DAYS/KM2 IN ZONE
59	8	8	0	0.0	0	0.00	1	0.00	21	.	0.0036
61	4	4	0	0.0	0	0.00	1	0.00	2	.	0.0006
62	4	4	0	0.0	0	0.00	1	0.00	23	.	0.0053
66	16	16	0	0.0	0	0.00	1	0.00	35	.	0.0031
69	51	51	8	15.4	8	7.81	1	0.00	145	19	0.0186
70	8	8	0	0.0	0	0.00	1	0.00	29	.	0.0034
71	4	4	0	0.0	0	0.00	1	0.00	8	.	0.0004
73	27	27	12	42.9	12	2.00	1	0.00	137	12	0.0030
74	4	4	4	100.0	4	3.91	1	0.00	20	5	0.0004
	125	125	24	19.2	24	4.00	1	0.00	420	26	0.0004

- The present caribou study will continue for the 1986-87 winter in order to determine densities in other zones and derive a provincial caribou population estimate. The future of woodland caribou hunting in the province will be reviewed.

SUMMARY: APPENDIX 6 OUTLINES THE 1986 WOODLAND CARIBOU HUNTING REGULATIONS.

GAME BIRDS

GENERAL

HUNTING REGULATIONS

The 1985 and 1986 game bird hunting regulations are outlined in Appendices 8 and 9, respectively. Season dates and bag limits from the recent past are presented in Appendix 10(a-f) and Appendix 21. Appendix 11 illustrates the former game management zones, established in 1975 and used until 1983. Appendix 12 illustrates the 76 wildlife management zones used since 1984.

DATA COLLECTION TECHNIQUES

Licence Sales

Licence sales are tabulated by the Revenue Section of Administrative Services Branch of Saskatchewan Parks and Renewable Resources, using returns from licence vendors and Department offices.

1985 Saskatchewan Game Bird Hunter Survey

20,000 of the 40,102 resident game bird hunters from 1984 were randomly selected to receive the 1985 Hunter Survey, using 1984 licence stubs. These hunters were mailed a survey form (Appendix 13) on September 30, 1985. Hunters returned eight per cent of the surveys by mid-November. On December 9, a follow up letter (Appendix 14) and another copy of the questionnaire were mailed to all non-respondents (92% of original mailing). The total response by the February 1, 1986 cut off date for receipt of resident returns was 36 per cent. The return rate for the 1984 survey was 38 per cent,the 1983 survey 39%, for 1982, 43 per cent and for 1981, 48 per cent.

On February 19, 1986, it was discovered that Canadian resident hunters had not been sampled. Fifteen hundred Canadian resident bird hunters were sent late questionnaires and returns were accepted until March 28, 1986. Fifteen hundred non-resident hunters were also sampled using the 1985 licence stubs. Non-resident questionnaires were mailed in December and no second mailing was conducted. Total responses and expansion factors used in computer analysis were as follows.

Saskatchewan Residents	4,733	7.88 (expansion factor)
Canadian Residents	439	4.79 (expansion factor)
Non Residents	523	6.43 (expansion factor)

The returned questionnaires were edited by the Statistics and Evaluation Section of Communications Branch and keypunched by Administrative Services Branch. Don Fowler, a Saskatoon consultant conducted the computer analysis of the data. Computer printouts were available May 7, 1986 and were used extensively to write this report.

Wing Collection

1,363 wings were collected from hunter-bagged upland game birds in the fall of 1985 to derive population age-structures, from which reproductive success can be inferred. Using special envelopes provided, Conservation Officers collected wings from hunters encountered in the field and enlisted the assistance of wildlife organizations to obtain samples. For the sixth consecutive year, individual and group awards (Champion Chicken Plucker) for the largest species collection provided additional incentive to the officers. Wildlife Branch staff collected wings on an incidental basis.

Experienced Wildlife Branch staff aged the wings according to primary feather eruption and wear.

Population Surveys

Upland game bird populations were surveyed between April 7 and May 16, 1986, using established, previously updated, survey methods. Wildlife Branch staff and Conservation Officers conducted the surveys. The data were compiled and analysed by the Wildlife Branch.

1985 LICENCE SALES

Thirty-eight thousand two hundred and fifty Saskatchewan game bird hunting licences were sold to provincial residents in 1985, down 5% from 1984 and well below the 10-year average of 55,000 (Table 75). Poor duck hunting was again responsible for the depressed sales, although poor grouse and pheasant hunting were also contributing factors. Licence sales to other Canadians were up 3% and non-residents of Canada up 7%, producing a total of 43,921 licences sold. In 1985, Saskatchewan residents were again not required to purchase a special licence to hunt cock pheasants.

Table 75. General Measures of Saskatchewan Game Bird Hunting, 1982 to 1985.

Hunter Category	Sask. Game Bird Licence Sales					Active Waterfowl Hunters (Ducks and Geese)				Active Upland Game Bird Hunters			
	1982	1983	1984	1985	1975-84 Average	1982	1983	1984	1985	1982	1983	1984	1985
Sask. Resident	50,179	47,157	40,102	38,243	54,734	35,276	36,498	26,955	27,722	24,320	25,627	20,019	18,810
Canadian Resident	3,719	2,978	2,125	2,181	3,726	3,296	2,807	1,892	1,978	1,014	1,139	896	733
Non-Resident (Alien)	4,034	3,741	3,277	3,497	4,138	3,876	3,593	3,170	3,273	1,551	1,499	1,418	1,235
TOTAL	57,932	53,876	45,504	43,921	62,598	42,448	42,898	32,017	32,973	26,885	28,265	22,333	20,778

MIGRATORY BIRDS

INTRODUCTION

The Canadian Wildlife Service is primarily responsible for migratory birds, although they are managed in Saskatchewan in consultation with the Department of Parks and Renewable Resources. The Canadian Wildlife Service directly collects much of the prerequisite data. The federal migratory game bird hunter survey is overlapped by the Saskatchewan Game Bird Hunter Survey (Appendix 13), the 1985 results of which are reported herein.

In 1985 the six year framework of stabilized duck regulations (Appendix 15) ended and duck bag limits were reduced to four birds per day (Appendix 10a). Goose hunting regulations remained stable except for calendar adjustments (Appendix 10b).

1985 HUNTING ACTIVITY

Waterfowl hunting is the main component of Saskatchewan game bird hunting. Total waterfowl hunting (hunter days) increased approximately 12% from 1984 (Table 76). Active hunters totalled 33,000 in 1985, including 5,250 (16%) non-residents. This total, 31% below the twelve year average of 47,540 active hunters, was held down by poor duck hunting. The 1985 hunters averaged 3.2 days in the field which is slightly above the 12-year average (Table 76) and equivalent to 1974-76 activity. Harvest per active Saskatchewan resident waterfowl hunter averaged 9.3 birds, while out of province Canadians bagged 10.2 birds and non residents of Canada bagged 15.5 birds. Resident hunters accounted for 75% of total waterfowl days hunted. For the third consecutive year there have been more active goose hunters than duck hunters.

Table 76. Saskatchewan Waterfowl Hunting Activity, 1973-85*

Year	Active Waterfowl Hunters	Waterfowl Hunter Days	Waterfowl Hunter Days/ Active Hunter
1973	43,200	116,700	2.7
1974	47,700	150,000	3.1
1975	56,100	175,500	3.1
1976	58,500	188,600	3.2
1977	57,100	163,300	2.9
1978	52,300	135,400	2.6
1979	51,300	138,300	2.7
1980	48,600	128,200	2.6
1981	38,300	98,100	2.6
1982	42,400	108,200	2.5
1983	42,900	122,900	2.9
1984	32,000	94,100	2.9
1973-1984 Average	47,540	134,940	2.8
1985	32,970	105,100	3.2
% Change			
1985 from 1984	+ 3%	+ 12%	+ 10%
1985 from Average	- 31%	- 22%	+ 14%

* Note: Waterfowl hunting activity includes both duck and goose hunting.

DUCKS

1985 Hunting Activity and Harvest

Low duck populations and a reduction in the bag limit to four ducks per day in the fall of 1985 continued to suppress duck hunting. Although duck hunting activity actually increased the harvest decreased to a record low (Figure 10). Twenty-three thousand four hundred (23,400) active duck hunters spent an average of 2.0 days hunting and reported a harvest of 153,000 ducks, 73% (111,000) of which were mallards (Tables 77,78). The geographic and chronological distribution of the duck harvest are illustrated in Figures 11 and 12, respectively. Estimated mallard harvest decreased by 20.9% from 1984. The 1985 mallard reproduction index was 2.13 immatures per adult compared to 1.63 in 1984 and the 1967-84 average of 2.03 (Western Wing Bee data). Federal migratory game bird permit sales fell to an all time low - 36,445 compared to 37,720 in 1984.

1986 Duck Populations and Regulations

1986 spring water conditions initially suggested a poorer year for duck production due to reduced May pond numbers - 2.356 million (down 20% from 1985). However, extensive rains throughout most of the south during May replenished moisture in much of the area. The July pond index was similar to 1985 (-4%) and near the 1976-85 average (+3%). Upland and over-water nesting cover remains severely impacted by the 5 to 6 drought years and more intense agricultural practices such as cultivation, grazing and burning.

Observations during the Waterfowl Breeding Population Survey for southern Saskatchewan conducted by the U.S. Fish & Wildlife Service (Doug Benning and Jim Nissen) and the C.W.S. (Nieman et al) indicated spring was later than normal but duck breeding chronology was near normal. Some unusually early nest success was in evidence as 4 mallard broods were observed during the May 7-29 survey. Farming activities got a later start due to the spring rains which may have benefited some early stubble nesting ducks. Precipitation in the southen stratum from September 1, 1985 to May 28, 1986 varied from 14% below normal at Hudson Bay to 40% above at Swift Current and Broadview.

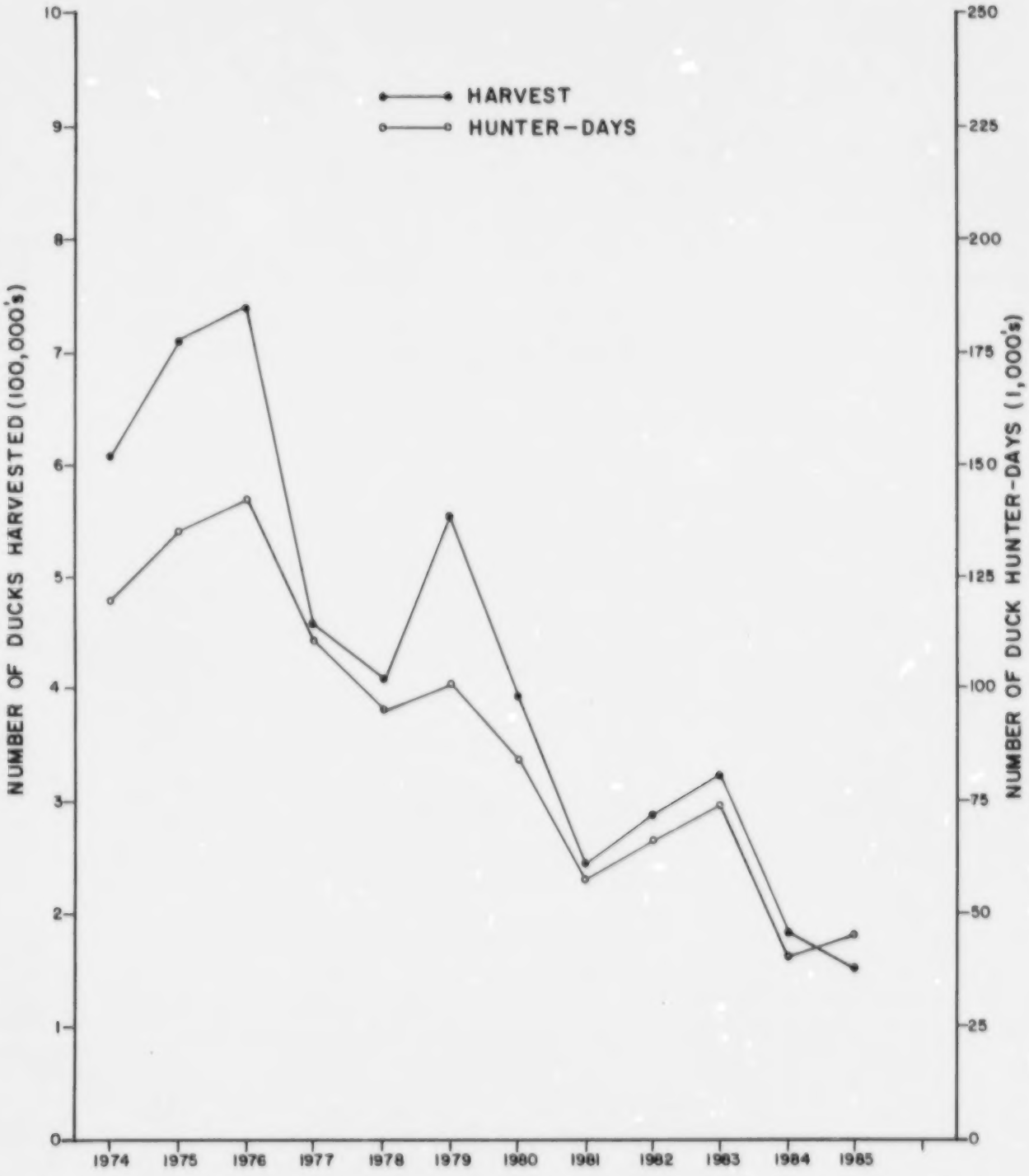


Figure 10. Saskatchewan duck hunter-days and harvest, 1974-1985

Table 77. Saskatchewan Waterfowl Harvest Summary 1985

	Sask. Resident		Non-Resident, Cdn.		Non-Resident, Alien		All Hunters	
MALLARD DUCKS	89,525	58.52%	6,021	3.93%	15,792	10.32%	111,338	72.78%
OTHER DUCKS	33,057	21.60%	1,787	1.16%	6,797	4.44%	41,640	27.21%
TOTAL DUCKS	122,581	80.13%	7,808	5.10%	22,589	14.76%	152,978	100.00%
Successful Hunters (% of Active)	17,084	(87.20%)	1,059	(90.20%)	2,431	(93.56%)	20,573	(88.06%)
Active Hunters	19,590		1,174		2,598		23,361	
Kill / Active Hunter	6.3		6.7		8.7		6.5	
Kill / Successful Hunter	7.2		7.4		9.3		7.4	
Days / Active Hunter	1.8		2.3		3.1		2.0	
Days / Successful Hunter	2.1		2.6		3.3		2.3	
Days Hunted	35,720.0		2,720.7		7,979.6		46,420.4	
CANADA GEESE	76,475	43.36%	6,921	3.93%	11,850	6.71%	95,257	54.01%
WHITE-FRONTED GEESE	29,306	16.61%	2,730	1.54%	6,674	3.78%	38,710	21.94%
SNOW GEESE	26,666	15.12%	2,443	1.38%	9,188	5.21%	38,297	21.71%
OTHER GEESE	3,223	1.82%	321	0.18%	553	0.31%	4,097	2.32%
TOTAL GEESE	135,670	76.92%	12,425	7.04%	28,266	16.02%	176,362	100.00%
Successful Hunters (% of Active)	19,054	(82.52%)	1,643	(90.26%)	2,906	(94.95%)	23,603	(84.38%)
Active Hunters	23,088		1,820		3,061		27,969	
Kill / Active Hunter	5.9		6.8		9.2		6.3	
Kill / Successful Hunter	7.1		7.6		9.7		7.5	
Days / Active Hunter	1.9		2.6		3.5		2.1	
Days / Successful Hunter	2.3		2.9		3.7		2.5	
Days Hunted	43,174.5		4,737.3		10,789.5		58,701.4	
WATERFOWL (D+G)	258,251	78.41%	20,233	6.14%	50,855	15.44%	329,339	100.00%
Successful Hunters (% of Active)	24,861	(89.68%)	1,887	(95.39%)	3,196	(97.64%)	29,944	(90.81%)
Active Hunters	27,722		1,978		3,273		32,973	
Kill / Active Hunter	9.3		10.2		15.5		10.0	
Kill / Successful Hunter	10.4		10.7		15.9		11.0	
Days / Active Hunter	2.8		3.8		5.7		3.2	
Days / Successful Hunter	3.2		4.0		5.9		3.5	
Days Hunted	78,886.7		7,458.0		18,769.2		105,113.9	

Table 78. Saskatchewan Duck Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	632	0.41	186	0.076	1.4	455	203
2	453	0.30	177	0.043	1.3	357	141
3	134	0.09	47	0.031	1.9	71	32
4	1,579	1.03	470	0.195	1.6	1,000	504
5	1,444	0.94	471	0.242	1.1	1,348	527
6	495	0.32	116	0.118	1.1	457	161
7	533	0.35	95	0.281	1.3	423	223
8	633	0.41	142	0.187	0.8	829	181
9	1,012	0.66	338	0.294	0.6	1,813	369
10	1,123	0.73	392	0.317	0.4	2,808	389
11	150	0.10	57	0.153	0.5	285	57
12	433	0.28	161	1.259	0.4	1,053	165
13	2,208	1.44	663	0.541	0.6	3,424	745
14	1,381	0.90	575	0.248	0.3	4,250	553
GR	12,209	7.98	3,890	0.188	0.7	18,575	4,250
15	1,769	1.16	501	0.263	1.5	1,208	706
16	3,917	2.56	764	0.738	1.3	3,121	1,313
17	3,776	2.47	952	0.988	1.2	3,144	1,215
18	1,988	1.30	581	0.267	1.6	1,261	709
19	3,573	2.34	1,015	0.388	1.2	2,981	1,282
20	2,423	1.58	675	0.438	2.4	1,013	793
21	12,156	7.95	2,390	1.450	1.4	8,599	3,919
22	2,347	1.53	529	0.496	2.0	1,180	681
23	2,579	1.69	717	0.449	1.3	1,954	811
24	2,456	1.61	618	0.509	0.7	3,334	868
25	1,523	1.00	535	0.262	0.5	3,213	478
26	4,769	3.12	884	1.080	0.7	6,755	1,702
27	5,111	3.34	877	1.040	1.1	4,638	1,488
28	804	0.53	191	0.593	1.5	527	212
29	4,633	3.03	931	0.869	1.8	2,620	1,144
30	8,866	5.80	1,630	1.223	2.4	3,655	2,709
FA	62,689	40.98	13,770	0.690	1.3	49,202	20,028
31	573	0.37	177	0.227	1.4	414	213
32	393	0.26	139	0.141	2.9	136	108
33	1,286	0.84	263	0.331	1.9	691	318
34	2,938	1.92	432	0.545	2.8	1,040	698
35	189	0.12	71	0.072	4.4	43	32
36	3,391	2.22	585	0.654	2.4	1,399	975
37	3,548	2.32	762	0.314	1.6	2,213	1,112
38	3,249	2.12	582	0.507	3.0	1,069	861
39	3,236	2.12	687	0.426	1.5	2,151	902
40	8,889	5.81	1,532	1.642	1.4	6,231	2,919
>>>>>>>>>>>>>>>>>>>>	TOTAL					>>>>>>>>>>>>>>>>>>>>	
41	6,664	4.36	1,176	0.924	2.2	3,039	1,998
42	8,418	5.50	1,457	1.136	1.9	4,350	2,467
43	3,468	2.27	574	0.512	2.2	1,569	985
44	3,373	2.20	680	0.737	2.6	1,296	901
45	4,797	3.14	750	0.626	2.6	1,848	1,181
46	1,979	1.29	475	0.332	1.6	1,252	552
47	1,909	1.25	366	0.334	3.0	645	491
PA	58,301	38.11	10,708	0.592	2.0	29,387	16,711
48	621	0.41	145	0.245	2.1	293	197
49	858	0.56	141	0.358	1.5	563	241
50	39	0.03	30	0.012	0.5	75	24
51	3,360	2.20	410	1.170	2.9	1,149	854
52	2,995	1.96	447	1.028	2.7	1,098	820
53	1,557	1.02	241	0.562	2.9	547	403
54	1,865	1.22	421	0.327	2.7	699	541
55	1,505	0.98	287	0.401	2.5	615	376
FF	12,801	8.37	2,123	0.487	2.5	5,037	3,456
56	315	0.21	101	0.067	1.4	219	123
57	337	0.22	81	0.102	2.7	125	67
58	16	0.01	24	0.007	0.3	51	8
59	201	0.13	54	0.034	1.6	125	43
60	608	0.40	67	0.158	2.5	245	201
61	2,094	1.37	138	0.689	2.5	847	633
62	24	0.02	8	0.006	3.0	8	8
63	71	0.05	39	0.013	2.0	35	28
64	142	0.09	87	0.040	1.6	87	55
65	0	0.00	8	0.000	0.0	0	0
66	108	0.07	27	0.010	4.4	25	21
67	1,048	0.68	211	0.121	2.4	445	288
68	133	0.09	41	0.032	1.9	69	27
69	159	0.10	51	0.020	2.9	54	51
70	173	0.11	16	0.020	6.3	28	28
71	47	0.03	8	0.003	6.0	8	8
72	536	0.35	32	0.029	3.7	146	146
73	709	0.46	39	0.015	4.4	162	158
FO	6,718	4.39	1,030	0.041	2.5	2,678	1,891
74	87	0.06	8	0.002	3.7	24	24
75	0	0.00	0	0.000	0.0	0	0
76	173	0.11	16	0.002	3.1	55	55
NS	260	0.17	24	0.001	3.3	79	79
	152,978	100.00	31,565	0.081	1.5	104,958	46,414

x Hunter Days are based on all Waterfowl Hunting.
x The Total Active Hunter value is NOT the true Provincial Total.

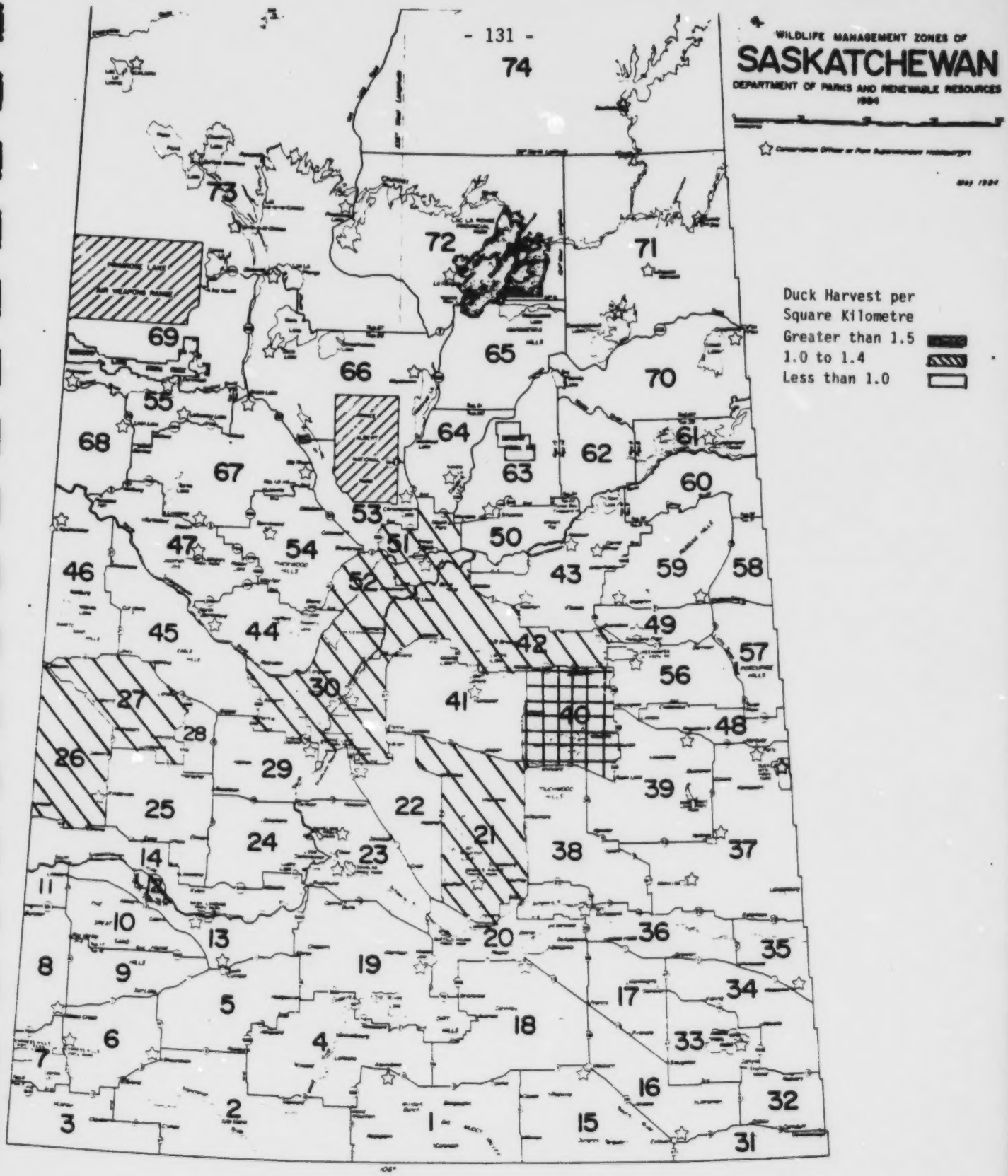


Figure 11 . Saskatchewan Duck Harvest Density 1985

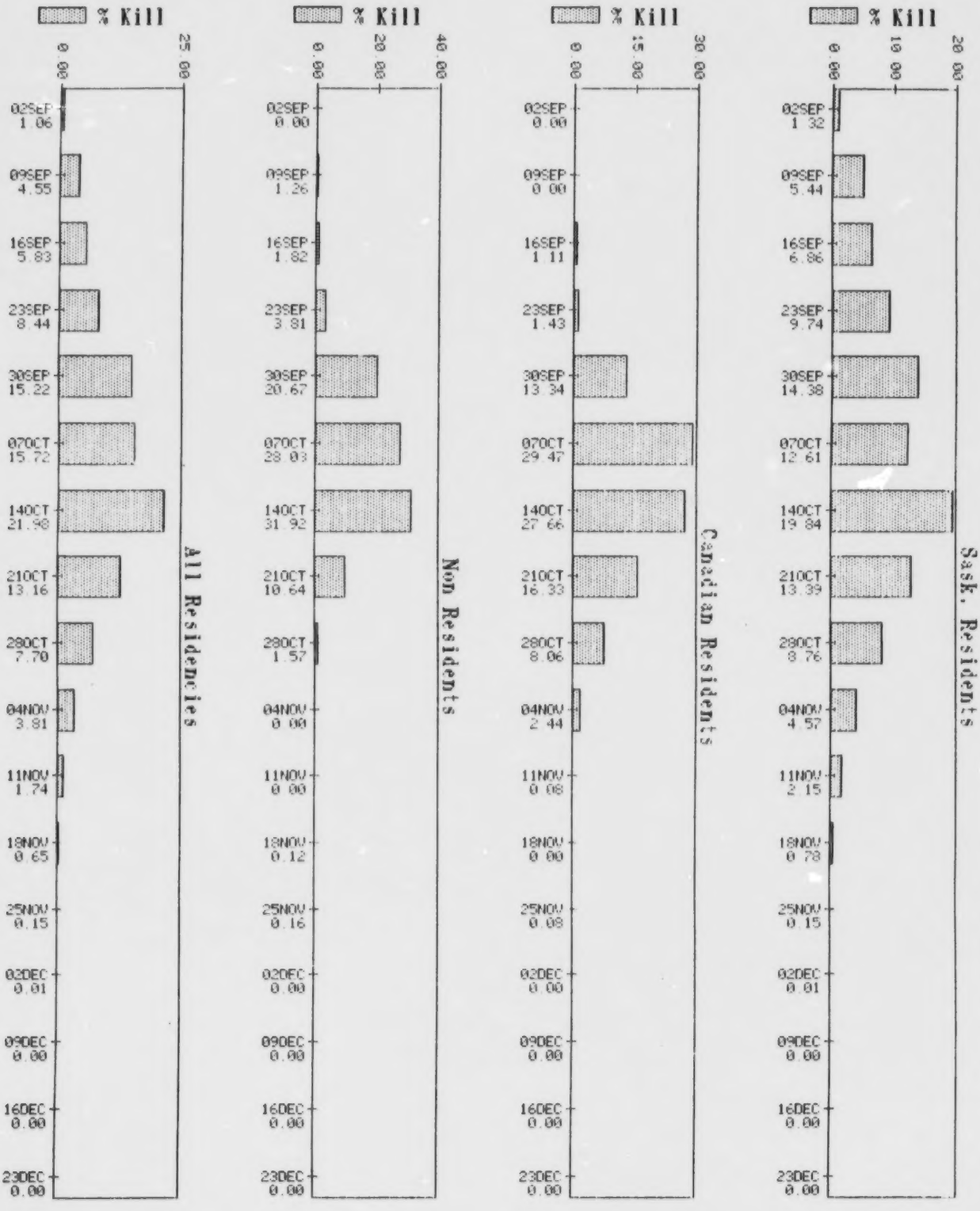


Figure 12. Saskatchewan 1985 Mallard Harvest by Weekly Intervals

1986 mallard breeding numbers for the six southern stratum were estimated at 1,598,900 up 30% from 1985 but still 20% below the 1976-85 average. Pintails were up 5% at 546,000 but 48% below average.

Other species estimates are:

		% Change	
	Indices	From 1985	From Average
Blue-winged Teal	878,700	-34%	- 28%
Redhead	218,000	-33%	- 11%
Canvasback	119,700	+ 1%	- 39%
Canada Goose	42,900	+31%	+108%
Total Ducks	6,196,000	+ 2%	- 17%

Mallard counts for the northern Saskatchewan stratum indicated mallards were down 23% from 1985 to 396,300 while pintails were up 78% to 24,800 (still 53% below average).

The 1986 continental mallard breeding population is estimated at 6.351 million which is up 16% from 1985 but 24% below the 1955-85 average (USFWS data). Pintails continent wide are at 3.201 million, up 9% from 1985 but 44% below the thirty year mean.

The annual July Waterfowl Production Survey for southern Saskatchewan indicated a 63% loss of ponds compared to the May pond index. Quality brood-rearing habitat was confined to the northwest and isolated areas in the eastern portion of the survey unit. The Missouri Coteau remained dry except for a band near the U.S. border but upland cover improved in quality.

The duck brood index of 101,000 was similar to 1985 (+6%) and near the 10 year average of 106,200. Average brood size is 5.7 which is up 8% from last year and 19% from average. The combined duck late-nesting index of 53.7 is 34% below 1985 and 68% below average. This index gives a rough measure of broods yet to hatch after the survey and indicates a poor late-nesting effort this year. The prognosis for duck production from the total survey unit is for near or slightly below average production.

The Saskatchewan Migratory Bird Avisory Committee (Nieman and Weins) met on May 2, 1986 to discuss prairie waterfowl populations and make preliminary recommendations for the 1986 hunting season. Discussions continued on June 3 and four options regarding duck regulations were prepared for consideration by the Saskatchewan Migratory Bird Steering Committee.

Option 1 Daily duck bag of 4, possession limit 8. Season opening north September 1, south September 10.

Option 2 Daily duck bag of 6 of which 4 may be mallards. Season opening north September 1, south September 15.

Option 3 Daily duck bag of 4, possession 8 until October 12. Starting October 13, daily bag of 6 of which 4 could be mallards.

Option 4 Daily duck bag of 6, possession 12. Season opening north September 1, south September 10.

After further federal-provincial discussion June 11 and a meeting in Ottawa, option 2 was chosen for the 1986 duck regulations.

Main reasons for altering the duck bag from the 4 per day of 1985 and delaying slightly to September 15 were:

1. Duck hunter interest, participation and licence sales are at an all time low. In order to increase participation and gain support for waterfowl programs an increase in the bag limit was warranted.

2. The North American Waterfowl Management Plan calls for a 25% harvest reduction in mallards when breeding populations are below certain fail safe levels. The 1985 Saskatchewan duck harvest was calculated by regression to be 39.5% below what it would have been under the stabilized regulations regime. S.P.R.R. felt that even though the overall bag limit was increased to 6 per day, the 1986 mallard harvest would still be 25% below expected.

3. C.W.S. views season delay as an important strategy to protect late nesting mallard hens and their broods.

4. S.P.R.R. views season delays as increasing the potential for crop damage complaints.

The season dates and bag limits for ducks are outlined in Appendix 9. No changes in wildlife management zone openings were recommended.

1986 Duck Season Dates and Bag Limits

		Bag Limit
Zones 1 to 42, 44 to 47, and 52, including Elbow and Valeport Wildlife Management Units; and starting Sept. 17 Last Mountain Lake Wildlife Management Unit	Sept. 15 - Dec. 13	6 ducks daily, only 4 of which may be mallards. 12 ducks in possession, only 8 of which may be mallards.
Zones 43, 48 to 51 and 53 to 76, including Clearwater River, Meadow Lake, Nipawin, and Lac la Ronge Provincial Parks; Horsehide Lake and Fort a la Corne Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 1 - Dec. 13	6 ducks daily only 4 of which may be mallards. 12 ducks in possession only 8 of which may be mallards.

GEESE

1985 Hunting Activity and Harvest

Good to excellent goose hunting opportunity was available in the fall of 1985 with good hunting weather remaining until about November 5. The goose harvest increased to 176,360 birds (Table 79; Figure 13) from 162,200 reported in 1984. The federal estimate for the total goose harvest in 1985 was 165,648 birds.

Goose hunting activity again out-ranked duck hunting with 28,000 active goose hunters compared to 23,500 duck hunters (Table 77). Goose hunters expended 59,000 hunter days, up 13% from 1984 compared to 46,400 duck hunter days. Canada and lesser snow goose harvest increased by 11% to 22% while the white-fronted goose harvest decreased by 1,700 birds.

The reported species composition of the harvest was Canada geese - 54%; white-fronted geese - 22%; snow geese - 22% and others (i.e. Ross' geese) -2.3%. Kill per active hunter was 6.3 geese compared to 5.9 in 1984. Harvest per successful hunter was 7.5 birds compared to 7.2 in 1984.

Goose tail fans submitted by hunters in the three prairie provinces to the National Species Composition Survey shows 1985 arctic goose reproduction was similar to 1984 although the small sample from Ross' geese (22 tail fans) showed 2.67 young per adult, the best in six years of sampling.

The geographic and chronological distribution of the goose harvest are portrayed in Figures 14 and 15.

1986 Goose Populations

Populations of large Canada geese (Western Prairie and Hi-Line Populations) continue to thrive in agricultural Saskatchewan. In local areas these prairie nesting geese are causing more depredation complaints from spring and summer grazing of cereal grains.

Table 79 . Saskatchewan Goose Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	593	0.34	181	0.071	1.3	455	251
2	561	0.32	184	0.053	1.6	357	216
3	118	0.07	47	0.028	1.7	71	39
4	1,367	0.77	374	0.168	1.4	1,000	496
5	2,270	1.29	563	0.381	1.7	1,348	856
6	783	0.44	171	0.187	1.7	457	302
7	658	0.37	192	0.347	1.6	423	231
8	2,025	1.15	291	0.597	2.4	829	648
9	4,428	2.51	761	1.289	2.4	1,813	1,448
10	6,864	3.89	1,181	1.936	2.4	2,808	2,427
11	678	0.38	151	0.688	2.4	285	228
12	3,054	1.73	466	8.878	2.9	1,053	889
13	8,539	4.83	1,466	2.091	2.5	3,424	2,685
14	10,865	6.15	1,804	1.947	2.6	4,250	3,737
GR	42,803	24.23	7,832	0.661	2.3	18,575	14,455
15	1,560	0.88	374	0.232	1.3	1,208	502
16	6,875	3.89	1,053	1.295	2.2	3,121	1,842
17	6,634	3.76	1,280	1.735	2.1	3,144	1,967
18	1,568	0.89	480	0.211	1.2	1,261	521
19	4,089	2.31	1,076	0.443	1.4	2,981	1,693
20	505	0.29	252	0.091	0.5	1,013	189
21	12,677	7.18	2,527	1.512	1.5	8,599	4,679
22	1,195	0.68	429	0.253	1.0	1,180	493
23	3,117	1.76	725	0.543	1.6	1,954	1,143
24	6,572	3.72	978	1.361	2.0	3,334	2,497
25	7,581	4.29	1,258	1.303	2.4	3,213	2,775
26	14,464	8.19	1,741	3.276	2.1	6,755	5,091
27	9,088	5.15	1,288	1.849	2.0	4,638	3,188
28	1,086	0.61	220	0.801	2.1	527	315
29	5,160	2.92	1,183	0.968	2.0	2,620	1,507
30	2,571	1.46	840	0.355	0.7	3,655	884
FA	84,743	47.98	15,702	0.933	1.7	49,202	29,285
31	572	0.32	197	0.227	1.4	414	232
32	87	0.05	87	0.031	0.6	136	28
33	1,218	0.69	296	0.314	1.8	691	368
34	989	0.56	309	0.184	1.0	1,040	336
35	47	0.03	24	0.018	1.1	43	12
36	1,075	0.61	323	0.207	0.8	1,399	393
37	3,464	1.96	818	0.306	1.6	2,213	1,101
38	572	0.32	325	0.089	0.5	1,069	168
39	4,267	2.42	982	0.561	2.0	2,151	1,280
40	9,267	5.25	2,170	1.712	1.5	6,231	3,343
>>>>>>>>>>>>>>>>>>>>	T O T A L					>>>>>>>>>>>>>>>>>>>>	
41	3,185	1.80	969	0.442	1.1	3,039	1,007
42	6,546	3.71	1,570	0.883	1.5	4,350	1,908
43	2,298	1.30	610	0.339	1.5	1,569	584
44	1,292	0.73	430	0.282	1.0	1,296	361
45	2,353	1.33	631	0.307	1.3	1,848	667
46	2,391	1.35	515	0.401	1.9	1,252	731
47	754	0.43	194	0.132	1.2	645	152
PA	40,378	22.86	10,446	0.410	1.4	29,387	12,672
48	371	0.21	176	0.147	1.3	293	127
49	1,017	0.58	217	0.425	1.8	563	321
50	165	0.09	69	0.050	2.2	75	51
51	1,062	0.60	228	0.370	0.9	1,149	286
52	1,087	0.62	331	0.373	1.0	1,098	278
53	395	0.22	140	0.142	0.7	547	113
54	545	0.31	223	0.096	0.8	699	157
55	1,074	0.61	272	0.286	1.8	615	240
FF	5,716	3.24	1,657	0.218	1.1	5,037	1,572
56	331	0.19	150	0.070	1.5	219	96
57	281	0.16	63	0.085	2.2	125	58
58	134	0.08	77	0.060	2.6	51	43
59	407	0.23	85	0.069	3.3	125	82
60	135	0.08	57	0.035	0.6	245	44
61	853	0.48	107	0.281	1.0	847	214
62	0	0.00	0	0.000	0.0	8	0
63	39	0.02	24	0.007	1.1	35	8
64	87	0.05	63	0.024	1.0	87	32
65	0	0.00	0	0.000	0.0	0	0
66	39	0.02	8	0.003	1.6	25	4
67	552	0.31	160	0.064	1.2	445	157
68	108	0.06	33	0.026	1.6	69	42
69	10	0.01	21	0.001	0.2	54	2
70	0	0.00	0	0.000	0.0	28	0
71	0	0.00	0	0.000	0.0	8	0
72	0	0.00	0	0.000	0.0	146	0
73	8	0.00	8	0.000	0.1	162	4
FO	2,985	1.69	856	0.018	1.1	2,678	788
74	0	0.00	0	0.000	0.0	24	0
75	0	0.00	0	0.000	0.0	0	0
76	0	0.00	0	0.000	0.0	55	0
NS	0	0.00	0	0.000	0.0	79	0
	176,625	100.00	36,494	0.035	1.7	104,958	58,771

* Hunter Days are based on all Waterfowl Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

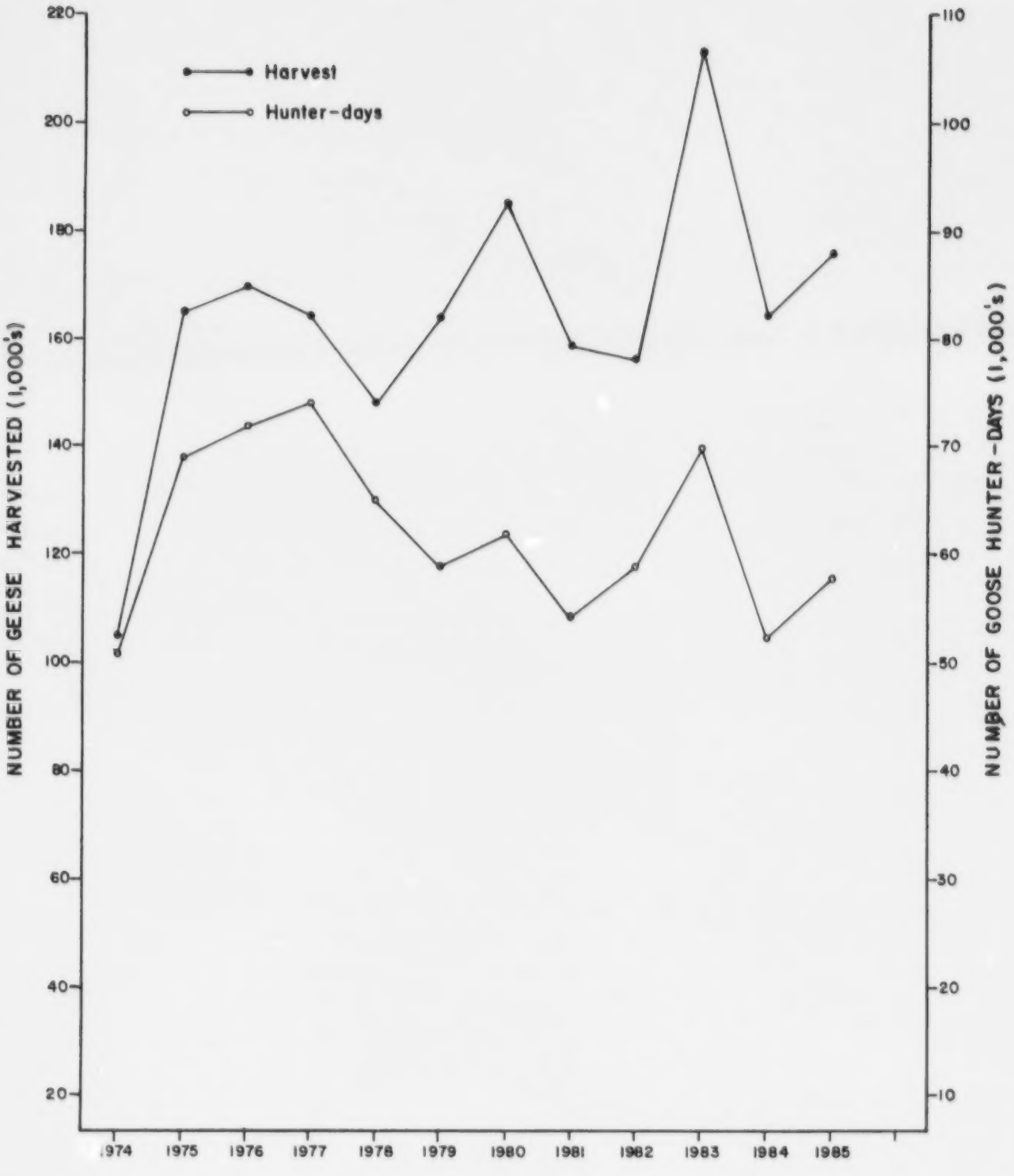


Figure 13. Saskatchewan goose hunter-days and harvest, 1974 - 1985

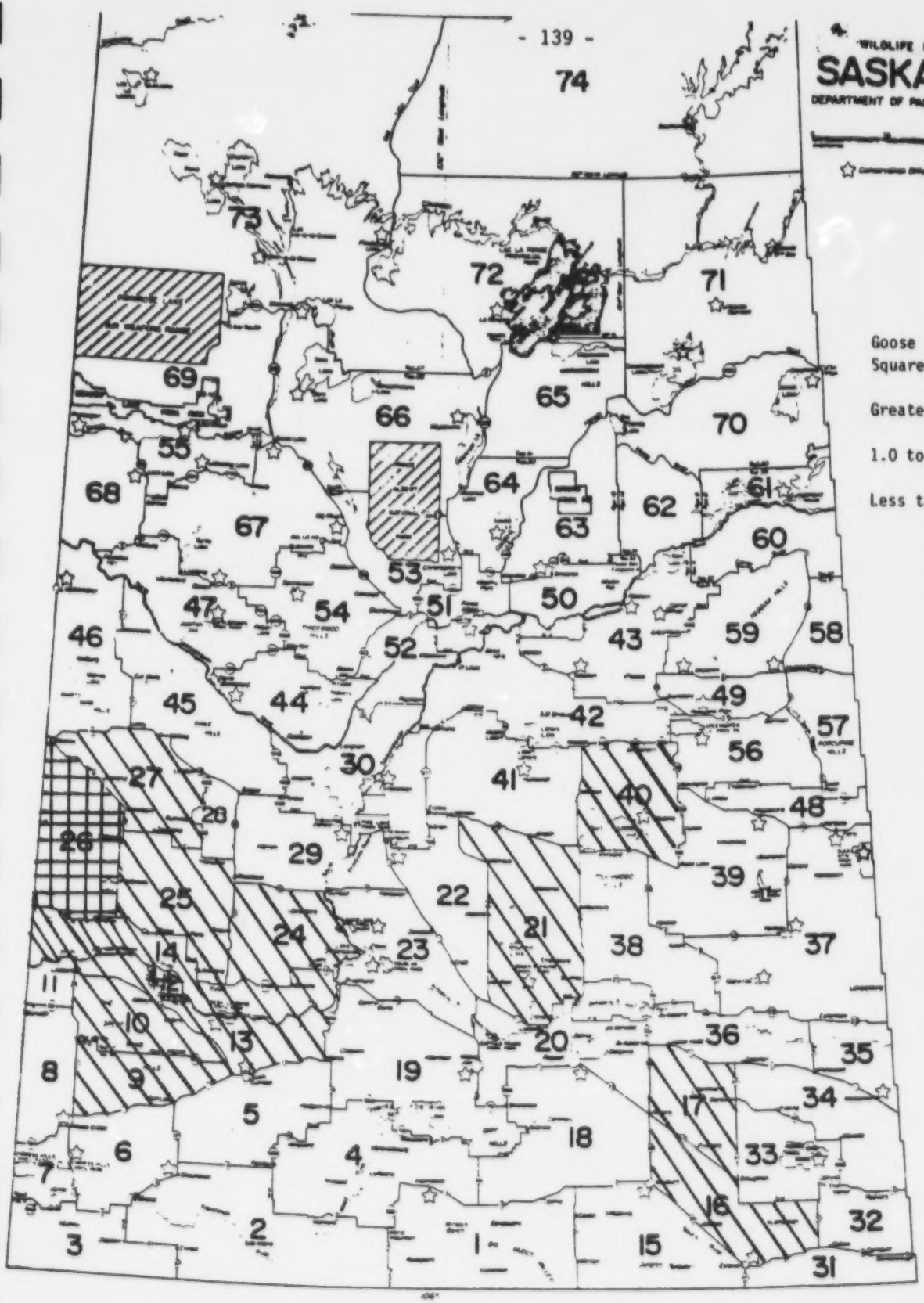


Figure 14. Saskatchewan Goose Harvest Density

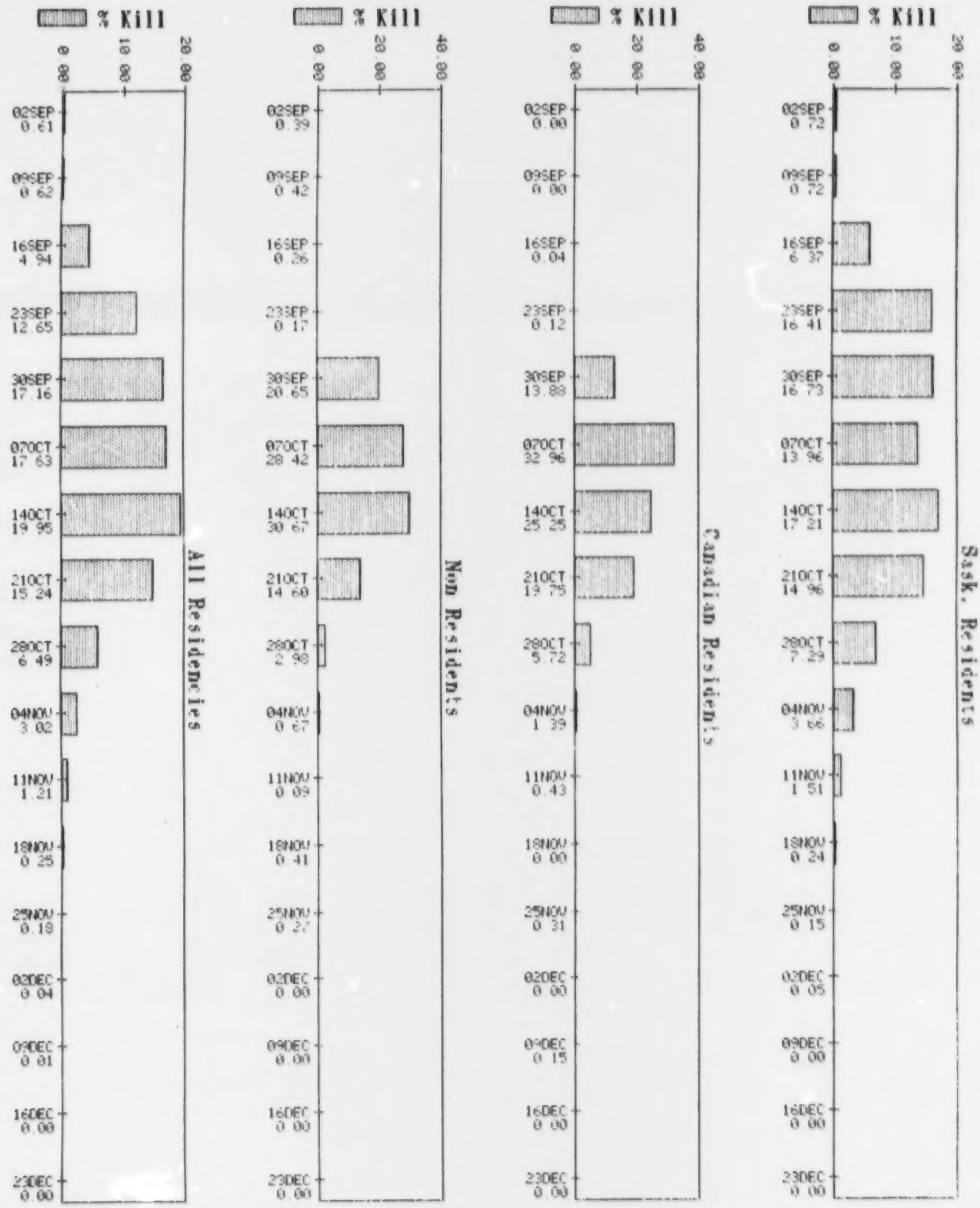


Figure 15. Saskatchewan 1985 Goose Harvest by Weekly Intervals

Winter snowfall conditions were normal or below normal throughout agricultural Saskatchewan. Initial spring reconnaissance surveys by U.S. Fish and Wildlife Service indicated pond levels and pond densities above normal north of a line connecting Unity, Saskatoon, Buchanan, and Redvers. Below normal conditions existed south of Kindersley, Chamberlain, Ituna, Broadview, and Carnduff but May rains may have brought some of these ponds back to normal. The 1986 Canada goose breeding population index for southern Saskatchewan was 42.9 (42,900) compared to 32.7 in 1985 which is 108% above the 1976-85 average.

The midwinter waterfowl survey conducted in the U.S.A. in December of 1985 shows some population increases from the 1984 estimates. The total Canada goose population was estimated at 2,816,200 compared to 2,763,200 in Dec. 1984. Total whitefronts estimated for the Mississippi, Pacific and Central Flyways were 225,300, down 17% from the 270,400 estimated for December 1984 (Appendix 19). Although the total snow goose, Ross' goose population decreased to 2.20 million from 2.59 million, the winter population objective from the North American Waterfowl Management Plan for snow geese is aiming at a reduction to about 1.5 million especially for the midcontinent lesser Snow Goose. Saskatchewan hunters are encouraged to harvest more snow geese.

Midwinter waterfowl surveys conducted in Mexico by the U.S. Fish and Wildlife Service in January 1986 placed major emphasis on black brant geese and redhead ducks. Black brant decreased 13% from 1985 and 12% from the previous 10 year average. Few brant geese migrate throught Saskatchewan on their fall journey south.

1986 Goose Hunting Regulations

Bag limits will be essentially the same as 1985 except that the date for the three bonus white geese has been advanced to October 1 from October 15 in all but the southwest portion of the province. The delay has been maintained in Zones 1-14, 19, 23-29 and 44 to 47 to allow the major portion of the Ross' goose population to migrate through Saskatchewan under the five bird per day regime. The split in the white-fronted goose bag limit (3 per day east) (2 per day west) has been maintained since the western segment of the population has not reached long term objective and must be afforded restrictive regulations. The 1986 spring survey recorded 184,000 whitefronts compared to 154,000 in 1985 but considerably below the 300,000 recorded in 1979 and 1982.

Non-resident goose hunting will start October 1 in most zones. Season dates for Saskatchewan residents are one day earlier than 1985 but the season has been extended to December 13 from December 7 in 1985. Appendix 9 provides season dates and further details on morning only hunting.

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 1 to 14, 19 and 22 to 29, including Elbow Wildlife Management Unit	Sept. 24 - Dec. 13	5 daily (2 only may be white-fronted geese) 10 possession (4 only may be white-fronted geese).
Zones 15, 16, 17, 18, 20, 21, 30 to 42, 44 to 47 and 52, including Valeport and Last Mountain Lake Wildlife Management Units.	Sept. 17 - Dec. 13	5 daily (3 only may be white-fronted geese) 10 possession (6 only may be white-fronted geese).
Zones 43, 48 to 51, and 53 to 76, including Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne and Horsehide Lake Wildlife Management Units; and Bronson Forest Recreation Site.	Sept. 1 - Dec. 13	5 daily (3 only may be white-fronted geese) 10 possession (6 only may be white-fronted geese).

SANDHILL CRANES

1985 Hunting Activity and Harvest

Annual harvest of cranes has traditionally been under 7,050 birds in Saskatchewan. A total of 6,200 sandhill cranes was harvested in the 1985 hunting season doubling the 1984 harvest (Table 80, Appendix 8). Fourteen hundred of the 1,760 active crane hunters were successful and spent 1,477 hunter days hunting sandhill cranes. Confirmed whooping crane sightings occurred after September 29 and did not interfere with the hunting season. Zone 21 accounted for 74% of the harvest. The 1985 federal harvest estimate for this species was 4,468 birds.

1986 Populations

The 1986 aerial survey data from USFWS spring and state personnel indicates a healthy population. In 1985 the crane population was estimated at 530,000 birds.

1986 Regulations

Saskatchewan recommended similar bag limits and season dates for cranes in 1986. Sandhill crane hunting will continue to be restricted to residents of Canada only following the recent inclusion of the sandhill crane on Appendix II of the CITES Treaty. A request has also been received to open the sandhill crane season in Zones 51, 57 and 58. However a crane season in the northern zones would overlap with the goose season and managers are reluctant to allow simultaneous crane and goose hunting because of the increased chance of shooting a whooping crane. This "policy" thus precludes an open crane season in zones opening September 1 for geese.

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 19, 21-24, 29, 30, 37-42, 44, and 52	Sept. 1 - Sept. 16	5 daily, 10 possession
Zones 11 to 14	Sept. 10 - Sept. 23	5 daily, 10 possession

Table 80. Saskatchewan Sandhill Crane Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days	WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	0	0.00	0	0.000	0.0	0	0	41	118	1.91	47	0.016	3.8	32	32
2	0	0.00	0	0.000	0.0	0	0	42	8	0.13	24	0.001	2.0	4	4
3	0	0.00	0	0.000	0.0	0	0	43	0	0.00	0	0.000	0.0	0	0
4	0	0.00	0	0.000	0.0	0	0	44	0	0.00	0	0.000	0.0	0	0
5	0	0.00	0	0.000	0.0	0	0	45	0	0.00	0	0.000	0.0	0	0
6	0	0.00	0	0.000	0.0	0	0	46	0	0.00	0	0.000	0.0	0	0
7	0	0.00	0	0.000	0.0	0	0	47	0	0.00	0	0.000	0.0	0	0
8	0	0.00	0	0.000	0.0	0	0	FA	646	10.42	252	0.007	4.2	154	154
9	0	0.00	0	0.000	0.0	0	0								
10	0	0.00	0	0.000	0.0	0	0	48	0	0.00	0	0.000	0.0	0	0
11	0	0.00	0	0.000	0.0	0	0	49	0	0.00	0	0.000	0.0	0	0
12	8	0.13	8	0.023	2.0	4	4	50	0	0.00	0	0.000	0.0	0	0
13	47	0.76	24	0.012	4.0	12	12	51	0	0.00	0	0.000	0.0	0	0
14	181	2.92	71	0.032	4.2	43	43	52	0	0.00	0	0.000	0.0	0	0
GR	236	3.81	102	0.004	4.0	59	59	53	0	0.00	0	0.000	0.0	0	0
								54	0	0.00	0	0.000	0.0	0	0
15	0	0.00	0	0.000	0.0	0	0	55	0	0.00	0	0.000	0.0	0	0
16	0	0.00	0	0.000	0.0	0	0	FF	0	0.00	0	0.000	0.0	0	0
17	0	0.00	0	0.000	0.0	0	0								
18	0	0.00	0	0.000	0.0	0	0	56	0	0.00	0	0.000	0.0	0	0
19	0	0.00	8	0.000	0.0	0	0	57	0	0.00	0	0.000	0.0	0	0
20	0	0.00	0	0.000	0.0	0	0	58	0	0.00	0	0.000	0.0	0	0
21	4,610	74.33	1,113	0.550	4.2	1,091	1,091	59	0	0.00	0	0.000	0.0	0	0
22	16	0.25	8	0.003	4.0	4	4	60	0	0.00	0	0.000	0.0	0	0
23	165	2.67	55	0.029	3.8	43	43	61	0	0.00	0	0.000	0.0	0	0
24	110	1.78	55	0.023	5.6	20	20	62	0	0.00	0	0.000	0.0	0	0
25	0	0.00	0	0.000	0.0	0	0	63	0	0.00	0	0.000	0.0	0	0
26	0	0.00	0	0.000	0.0	0	0	64	0	0.00	0	0.000	0.0	0	0
27	0	0.00	0	0.000	0.0	0	0	65	0	0.00	0	0.000	0.0	0	0
28	0	0.00	0	0.000	0.0	0	0	66	0	0.00	0	0.000	0.0	0	0
29	347	5.59	126	0.065	4.0	87	87	67	0	0.00	0	0.000	0.0	0	0
30	71	1.14	39	0.010	3.6	20	20	68	0	0.00	0	0.000	0.0	0	0
FA	5,319	85.77	1,404	0.059	4.2	1,264	1,264	69	0	0.00	0	0.000	0.0	0	0
								70	0	0.00	0	0.000	0.0	0	0
31	0	0.00	0	0.000	0.0	0	0	71	0	0.00	0	0.000	0.0	0	0
32	0	0.00	0	0.000	0.0	0	0	72	0	0.00	0	0.000	0.0	0	0
33	0	0.00	0	0.000	0.0	0	0	73	0	0.00	0	0.000	0.0	0	0
34	0	0.00	0	0.000	0.0	0	0	FO	0	0.00	0	0.000	0.0	0	0
35	0	0.00	0	0.000	0.0	0	0								
36	0	0.00	0	0.000	0.0	0	0	74	0	0.00	0	0.000	0.0	0	0
37	8	0.13	8	0.001	1.0	8	8	75	0	0.00	0	0.000	0.0	0	0
38	39	0.64	24	0.006	5.0	8	8	76	0	0.00	0	0.000	0.0	0	0
39	0	0.00	8	0.000	0.0	0	0	MS	0	0.00	0	0.000	0.0	0	0
40	473	7.62	142	0.087	4.6	102	102								
>>>>>>>>>>>>>>>>>>>>		TOTAL		>>>>>>>>>>>>>>>>>>>>					6,202	100.00	1,759	0.001	4.2	1,477	1,477

* The Total Active Hunter value is NOT the true Provincial Total.

OTHER WATERFOWL REGULATIONS

The 500 meter hunting restrictions on 45 major waterfowl staging areas are set by the Department of Parks and Renewable Resources. One change in restriction for 1986 will be in the Eyebrow Lake area. The existing wildlife refuge status will be maintained on the south half of Eyebrow Lake but the former goose restriction will be replaced by a 500 meter limit for geese only on the north half of Eyebrow Lake.

A few requests for 500 metre restrictions will continue to be evaluated in 1986. These include the Chapleau Lakes and Strawberry Lake near Montmartre, Buck Lake south of Regina, and the North Saskatchewan River. Decisions on whether to implement restrictions on these water bodies will be made before the 1987 hunting seasons.

Clearwater River Provincial Park, designated in 1986, is open to both waterfowl and upland game bird hunting during the prescribed season dates in Zone 73.

UPLAND GAME BIRDS

1985 HUNTING ACTIVITY

Upland bird hunting activity was slightly lower than 1984 levels with a decrease of 10% in hunter recreation days and 7% in active hunters (Tables 81, 82). Active hunters dropped 34% below the 1973-1984 average (Figure 16). The 20,800 active upland bird hunters each spent an average of 1.9 days hunting. Activity (hunter days) decreased for all upland species except ruffed grouse and were the lowest since the fall of 1974 (37,800).

The Farmlands (Zones 15-30) continued to receive the heaviest hunting pressure (Table 83) with 42% of total upland hunter days generated there. On an area basis, hunting pressure in the Grasslands decreased more than the Farmlands with .165 hunter days/km^2 in the Grasslands and .184 hunter days/km^2 in the Farmlands. Zones 15 and 12 replaced Zone 11 for heaviest upland hunting pressure with 0.44 and 0.40 days/km^2 of total area. Zones 4, 5, 11 and 19 received between .25 and .40 hunter days/km^2, while Zones 9, 10, 13, 21 and 31 received between between .2 and .25 hunter days/km^2 of total area.

Since the area of remaining native habitat in each new wildlife management zone has not been calculated yet, hunting pressure per unit of native habitat cannot be compared to 1983 levels.

Table 81. Saskatchewan Upland Game Bird Hunting Activity, 1973-85

Year	Active Upland Bird Hunters	Upland Bird Hunter Days	Hunter Days/ Active Hunter
1973	28,500	53,275	1.9
1974 *	21,857	37,801	1.7
1975 *	27,812	48,161	1.7
1976 *	39,035	86,525	2.2
1977 *	41,772	93,496	2.2
1978	36,766	72,378	2.0
1979	36,373	72,096	2.0
1980	36,786	75,578	2.1
1981	32,147	68,988	2.1
1982	26,884	50,382	1.9
1983	28,266	60,146 **	2.1
1984	22,334	44,854 **	2.0
1973-1984 Average	31,545	63,640	2.0
1985	20,777	40,149 **	1.9
% Change			
1985 from 1984	- 7%	- 10%	- 5%
1985 from Average	- 34%	- 37%	- 5%

* Erroneous data was published for these years prior to 1979 corrections.
** Includes pheasant hunter days.

Table 82. Saskatchewan Upland Game Bird Harvest Summary 1985

	Sask. Resident		Non-Resident, Cdn.		Non-Resident, Alien		All Hunters	
SHARP-TAILED GROUSE	36,768	87.98%	1,677	4.01%	3,344	8.00%	41,788	100.00%
Successful Hunters (% of Active)	10,071	(70.84%)	465	(78.22%)	772	(75.00%)	11,307	(71.38%)
Active Hunters	14,216		594		1,029		15,838	
Kill / Active Hunter	2.6		2.8		3.3		2.6	
Kill / Successful Hunter	3.7		3.6		4.3		3.7	
Days / Active Hunter	1.0		1.3		1.4		1.1	
Days / Successful Hunter	1.4		1.6		1.9		1.5	
Days Hunted	14,570.1		761.6		1,453.2		16,784.9	
HUNGARIAN PARTRIDGE	34,971	83.26%	2,539	6.04%	4,488	10.68%	41,998	100.00%
Successful Hunters (% of Active)	7,533	(65.74%)	388	(74.31%)	688	(77.53%)	8,609	(66.90%)
Active Hunters	11,458		522		887		12,867	
Kill / Active Hunter	3.1		4.9		5.1		3.3	
Kill / Successful Hunter	4.6		6.5		6.5		4.9	
Days / Active Hunter	1.0		1.5		1.6		1.0	
Days / Successful Hunter	1.5		2.0		2.0		1.6	
Days Hunted	11,205.4		771.2		1,376.0		13,352.6	
RUFFED GROUSE	14,294	94.82%	407	2.70%	373	2.47%	15,074	100.00%
Successful Hunters (% of Active)	4,042	(66.45%)	96	(76.92%)	109	(50.00%)	4,248	(66.09%)
Active Hunters	6,083		125		219		6,427	
Kill / Active Hunter	2.3		3.3		1.7		2.3	
Kill / Successful Hunter	3.5		4.3		3.4		3.5	
Days / Active Hunter	0.8		1.2		0.7		0.8	
Days / Successful Hunter	1.3		1.6		1.4		1.3	
Days Hunted	5,090.5		148.5		154.3		5,393.3	
SPRUCE GROUSE	4,200	99.32%	29	0.67%	0	0.00%	4,229	100.00%
Successful Hunters (% of Active)	1,024	(76.47%)	10	(100.00%)	0	(0.00%)	1,034	(75.91%)
Active Hunters	1,340		10		13		1,362	
Kill / Active Hunter	3.1		3.0		0.0		3.1	
Kill / Successful Hunter	4.1		3.0		0.0		4.1	
Days / Active Hunter	1.0		0.5		0.0		1.0	
Days / Successful Hunter	1.3		0.5		0.0		1.3	
Days Hunted	1,300.2		4.8		0.0		1,305.0	
PHEASANT	7,084	100.00%	0	0.00%	0	0.00%	7,084	100.00%
Successful Hunters (% of Active)	2,112	(57.02%)	0	(0.00%)	0	(0.00%)	2,112	(57.02%)
Active Hunters	3,704		0		0		3,704	
Kill / Active Hunter	1.9		0.0		0.0		1.9	
Kill / Successful Hunter	3.4		0.0		0.0		3.4	
Days / Active Hunter	0.9		0.0		0.0		0.9	
Days / Successful Hunter	1.6		0.0		0.0		1.6	
Days Hunted	3,325.4		0.0		0.0		3,325.4	
ALL UPLAND GAMEBIRDS	97,318	88.33%	4,651	4.22%	8,205	7.44%	110,174	100.00%
Successful Hunters (% of Active)	15,011	(79.80%)	623	(84.96%)	971	(78.64%)	16,605	(79.92%)
Active Hunters	18,810		733		1,235		20,777	
Kill / Active Hunter	5.2		6.3		6.6		5.3	
Kill / Successful Hunter	6.5		7.5		8.5		6.6	
Days / Active Hunter	1.9		2.3		2.4		1.9	
Days / Successful Hunter	2.4		2.7		3.1		2.4	
Days Hunted	35,483.6		1,681.3		2,983.5		40,148.5	

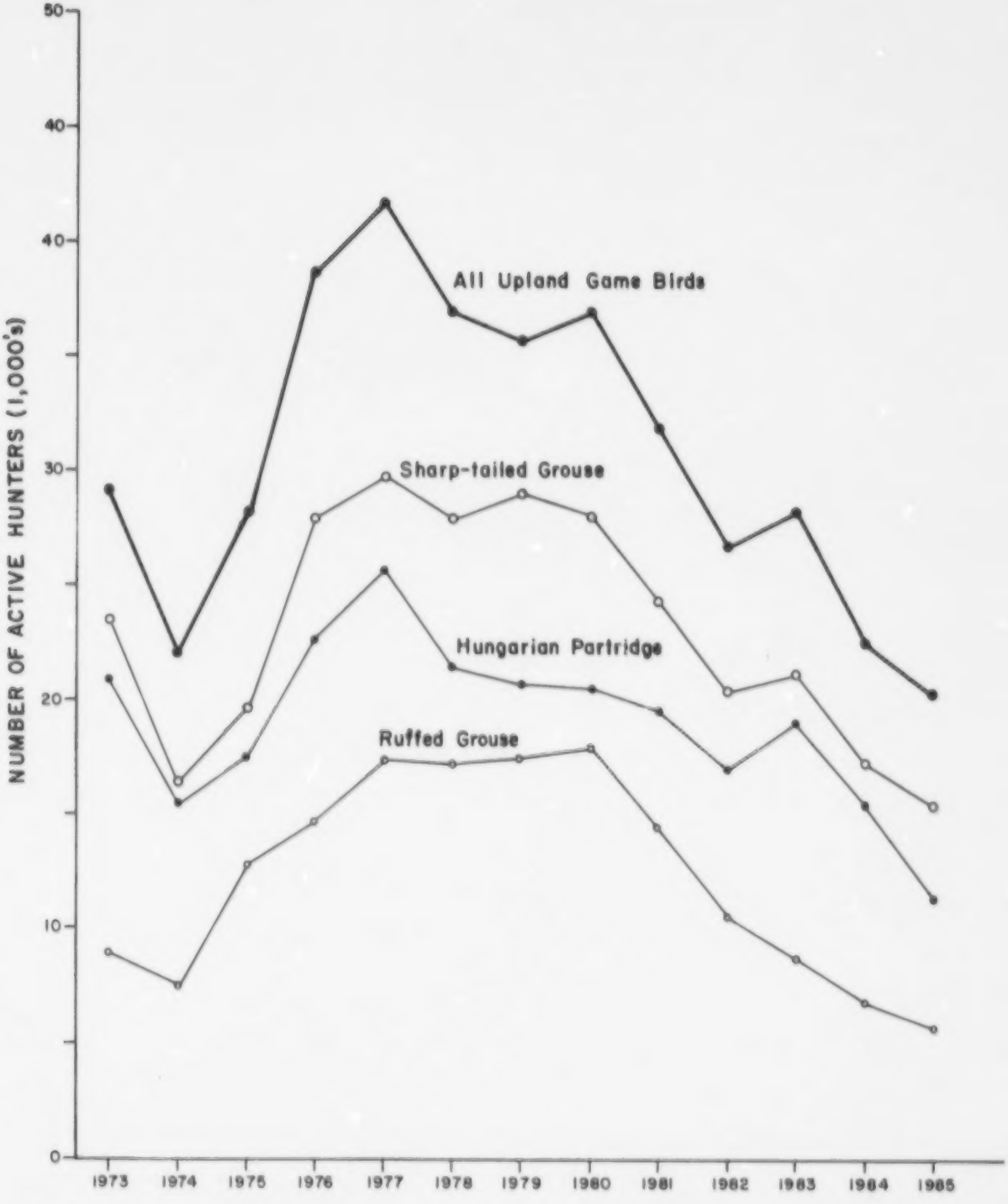


Figure 16. Upland game bird hunters active in Saskatchewan, 1973-1985. (Active pheasant hunters included in 1983-1985)

Table 83. Saskatchewan 1985 Upland Game Bird Hunting Activity By Ecological Zone (1985 vs 1984)

Ecological Zone	Total Hunter Days		% of Total Days		Hunter days/km^2	
	1984	1985	1984	1985	1984	1985
Grassland (64,799 km^2, 10.3%)	12,717	10,666	28.4%	26.6%	0.196	0.165
Farmlands (90,826 km^2, 14.5%)	18,010	16,720	40.2%	41.6%	0.198	0.184
Parklands (98,446 km^2, 15.7%)	10,066	7,201	22.5%	17.9%	0.102	0.073
Forest Fringe (26,262 km^2, 4.2%)	1,426	2,302	3.2%	5.7%	0.054	0.088
Forest (165,120 km^2, 26.3%)	2,509	3,230	5.6%	8.0%	0.015	0.020
Northern Shield (181,799 km^2, 29.0%)	55	28	0.1%	.07%	0.001	0.001
Provincial Total (627,252 km^2)	**44,783**	**40,145**	**100%**	**100%**	**0.071**	**0.064**

SHARP-TAILED GROUSE

1985 Hunting Activity and Harvest

The 1985 provincial sharptail harvest decreased by 23% from 1984 to 41,800 birds, the lowest level since 1974 and 52% below the 1972-84 average (Tables 84, 85; Figure 17). The 1985 season dates were again delayed to September 30 in order to reduce the harvest. Reproduction in 1985 was good with a provincial index of 1.71 juveniles per adult in the harvest. Hunter success decreased 19% from 1984 with 2.6 birds harvested per active sharptail hunter. Active sharptail hunters decreased by 8% to 16,000, the lowest level since 1974 and the number of sharptails harvested per upland hunter day (1.0) decreased slightly from the 1.2 birds per day recorded in 1984.

Hunter success in the Grasslands increased slightly to 0.88 birds harvested per hunter day from 0.83 in 1984 (Table 86). In the Farmlands, success decreased to 1.18 birds per day from 1.40 in 1984. Parkland sharptail hunters also had decreased success with 1.33 birds per hunter day from 1.59 in 1984. These figures are used to provide a general measure of hunter success. Geographic distribution of the hunter harvest and chronologic breakdown of the harvest are depicted in Figures 18 and 19, respectively.

The five major sharp-tailed grouse hunting zones in 1985 based on harvest per square kilometre for total zone area were Wildlife Management Zones 9, 10, 11, 12 and 19 (Table 87). Twenty-five percent of the sharptail harvest occurred during the opening week (September 30 - October 5) of the southern season.

In summary, it appears that the 1985 sharptail season was characterized by reduced hunter interest, success and harvest. The reduction in bag limit, low populations and one week delay in season in the southern zones were probably factors instrumental in reducing the harvest by twenty-three percent.

Table 84. Sharp-tailed Grouse Hunting Data for Saskatchewan, 1972-1985

	Hunting Level			Hunting Success		
Year	Active Sharptail Hunters	Total All Upland Bird Hunter Days	Hunter Days/ Active Sharptail Hunter	Sharptail Harvest	Sharptails Harvested/ Active Sharptail Hunter	Sharptails Harvested/ Total Upland Hunter Days
1972	28,575	56,534	2.0	107,813	3.8	1.9
1973	23,498	53,275	2.3	88,178	3.8	1.7
1974 *	16,041	37,801	2.4	48,808	3.0	1.2
1975 *	19,746	48,161	2.4	60,428	3.1	1.1
1976 *	27,976	86,525	3.1	130,784	4.7	1.5
1977 *	29,794	93,496	3.1	107,003	3.6	1.1
1978	27,577	72,380	2.6	104,497	3.8	1.4
1979	28,221	72,096	2.6	126,824	4.5	1.8
1980	27,949	75,578	2.7	108,455	3.9	1.4
1981	24,461	68,988	2.8	82,745	3.4	1.2
1982 *	20,375	50,382	2.5	51,741	2.5 *	1.0
1983	21,068	60,146 **	2.9	58,823	2.8	1.0
1984	17,164	44,854	2.6	54,233	3.2	1.2
1972-1984 Average	24,034	63,094	2.6	86,949	3.6	1.4
1985	15,838	40,148	2.5	41,788	2.6	1.0
% Change						
1985 from 1984	- 8%	- 10%	- 4%	- 23%	- 19%	- 17%
1985 from Average	- 34%	- 36%	- 4%	- 52%	-28%	- 29%

* Erroneous data was previously published for these years
** 1983 - 1985 total upland bird hunter days includes pheasant hunter days

Table 85. Sharp-tailed Grouse Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	1,191	2.85	348	0.143	1.2	1,000	424
2	847	2.03	439	0.080	0.7	1,205	340
3	47	0.11	60	0.011	0.8	58	20
4	967	2.31	697	0.119	0.4	2,364	464
5	881	2.11	550	0.148	0.5	1,910	428
6	287	0.69	193	0.068	1.3	214	114
7	74	0.18	59	0.039	0.6	123	34
8	241	0.58	103	0.071	0.9	267	96
9	1,186	2.84	554	0.345	1.5	805	429
10	1,252	3.00	663	0.353	1.5	822	475
11	494	1.18	153	0.501	2.0	251	164
12	284	0.68	126	0.825	2.1	138	79
13	745	1.78	491	0.182	0.9	836	327
14	849	2.03	560	0.152	1.3	673	323
GR	9,345	22.36	4,995	0.144	0.9	10,666	3,716
15	2,047	4.90	782	0.304	0.7	2,971	918
16	741	1.77	549	0.140	0.9	830	355
17	718	1.72	505	0.188	1.1	629	289
18	826	1.98	523	0.111	1.1	786	317
19	4,298	10.28	1,419	0.466	1.2	3,623	1,799
20	993	2.38	558	0.179	1.2	863	414
21	2,453	5.87	1,352	0.293	1.2	2,048	1,065
22	623	1.49	362	0.132	1.5	408	224
23	1,340	3.21	579	0.234	1.3	1000	535
24	811	1.94	558	0.168	1.2	673	350
25	525	1.26	295	0.090	1.6	330	203
26	538	1.29	314	0.122	1.8	299	175
27	460	1.10	248	0.094	1.9	245	152
28	383	0.92	125	0.283	2.1	187	126
29	1,692	4.05	823	0.317	1.7	978	615
30	1,288	3.08	880	0.178	1.5	850	487
FA	19,736	47.23	9,872	0.217	1.2	16,720	8,023
31	782	1.87	341	0.310	1.3	615	289
32	500	1.20	145	0.179	1.7	296	187
33	691	1.65	294	0.178	1.5	455	269
34	583	1.39	254	0.108	2.3	258	187
35	156	0.37	140	0.060	1.7	94	54
36	756	1.81	405	0.146	1.3	595	307
37	1,231	2.95	604	0.109	1.2	1,020	476
38	268	0.64	304	0.042	1.1	256	99
39	380	0.91	339	0.050	0.8	479	188
40	707	1.69	381	0.131	1.8	400	263
>>>>>>>>>>>>>>>>>>>>	T O T A L					>>>>>>>>>>>>>>>>>>>>	

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
41	265	0.63	254	0.037	1.5	178	119
42	405	0.97	333	0.055	0.8	494	201
43	153	0.37	109	0.023	1.1	145	47
44	604	1.44	375	0.132	1.2	487	300
45	1,467	3.51	565	0.191	1.7	887	584
46	181	0.43	218	0.030	1.1	169	75
47	456	1.09	233	0.080	1.2	372	166
PA	9,586	22.94	5,295	0.097	1.3	7,201	3,810
48	55	0.13	39	0.022	0.3	189	16
49	111	0.26	54	0.046	0.6	181	47
50	126	0.30	102	0.038	0.5	248	51
51	128	0.31	183	0.045	0.7	199	65
52	324	0.77	311	0.111	1.0	319	132
53	110	0.26	95	0.040	0.4	256	47
54	370	0.89	298	0.065	0.9	433	154
55	418	1.00	150	0.111	0.9	477	146
FF	1,642	3.93	1,232	0.063	0.7	2,302	658
56	150	0.36	71	0.032	0.5	315	59
57	118	0.28	63	0.036	0.8	150	39
58	8	0.02	24	0.004	0.1	63	8
59	101	0.24	30	0.017	1.2	86	19
60	0	0.00	14	0.000	0.0	24	0
61	0	0.00	0	0.000	0.0	18	0
62	5	0.01	13	0.001	0.1	40	5
63	134	0.32	87	0.024	0.3	467	63
64	55	0.13	55	0.016	0.4	138	28
65	47	0.11	39	0.007	0.4	118	20
66	8	0.02	16	0.001	0.1	91	12
67	496	1.19	173	0.057	0.7	709	193
68	8	0.02	28	0.002	0.1	103	8
69	126	0.30	62	0.016	0.4	334	47
70	47	0.11	32	0.006	0.4	106	12
71	96	0.23	28	0.005	0.7	132	32
72	0	0.00	16	0.000	0.0	102	0
73	79	0.19	39	0.002	0.3	232	32
FO	1,479	3.54	790	0.009	0.5	3,230	576
74	0	0.00	0	0.000	0.0	4	0
75	0	0.00	0	0.000	0.0	8	0
76	0	0.00	0	0.000	0.0	16	0
MS	0	0.00	0	0.000	0.0	28	0
	41,788	100.00	22,183	0.006	1.0	40,145	16,783

* Hunter Days are based on all Upland Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

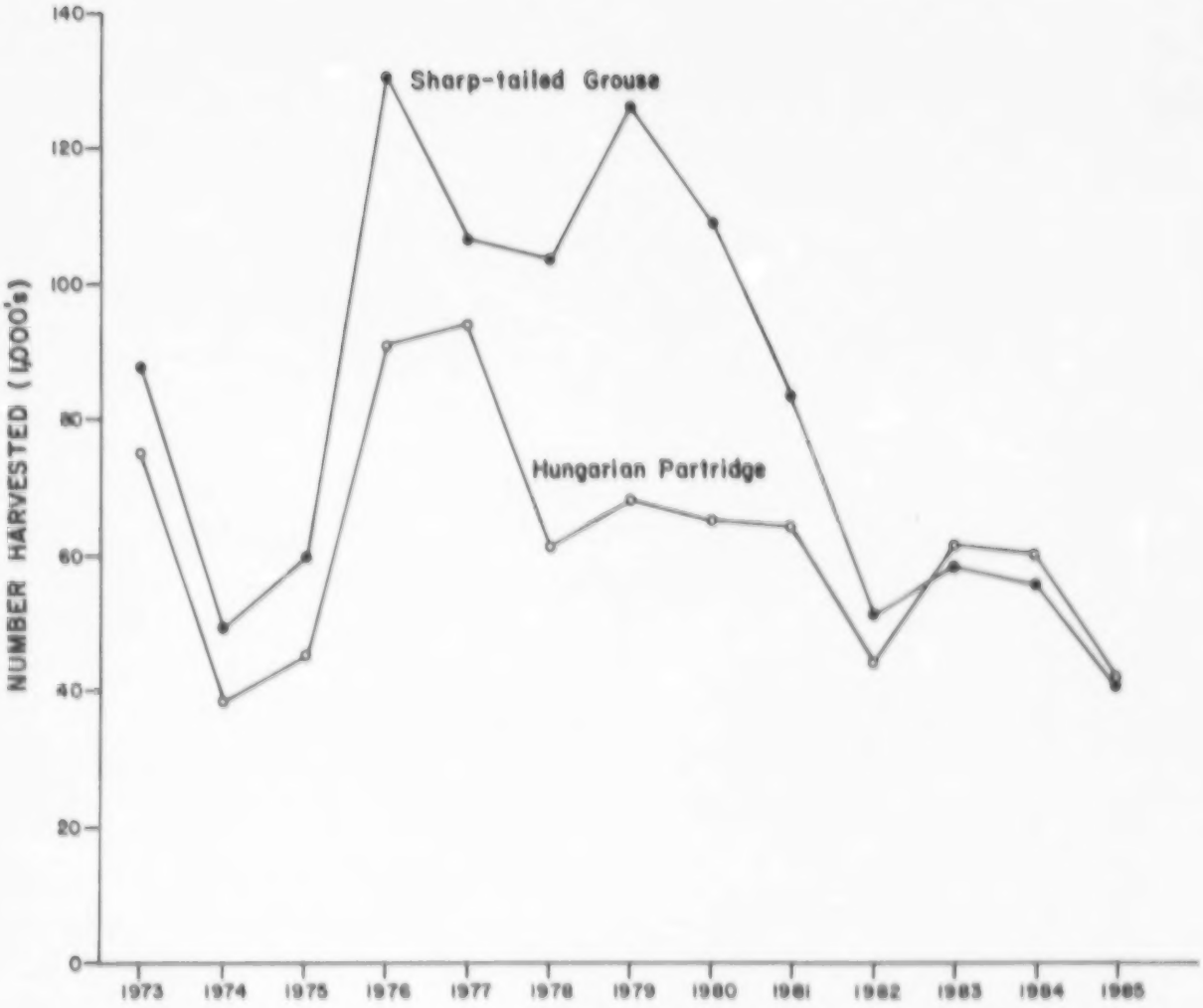


Figure 17. Saskatchewan Sharp-tailed Grouse and Hungarian Partridge harvest, 1973-1985

Table 86. Sharp-tailed Grouse Hunting Data for Saskatchewan by Ecological Divisions, 1985 vs 1984.

	Grassland Zones 1-14		Farmland Zones 15-30		Parkland Zones 31-47		Forest Fringe Zones 48-55		Forest Zones 56-73		Northern Shield Zones 74-76		Province Zones 1-76	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
Sharptail Harvest	10,555	9345	25,179	19,736	15,988	9,586	1,319	1,642	1,047	1,479	0	0	54,088	41,788
(% of Total)	19.5%	22.4%	46.5%	47.2%	29.6%	22.9%	2.4%	3.9%	1.9%	3.5%	0%	0%	100%	100%
Harvest Pressure (Sharptail kill/km^2)	0.163	0.144	0.277	0.217	0.162	0.097	0.050	0.063	0.006	0.009	0	0	0.008	0.006
All Upland Bird Hunter Days	12,717	10,666	18,010	16,720	10,066	7,201	1,426	2,302	2,509	3,230	55	28	44,783	40,145
(% of Total)	28.4%	26.6%	40.2%	41.6%	22.5%	17.9%	3.2%	5.7%	5.6%	8.0%	0.1%	.07%	100%	100%
Species Hunter Days	3,652	3716	7,957	8,023	4,896	3,810	477	658	392	576	0	0	17,375	16,783
(% of Total)	21.0%	22.1%	45.8%	47.8%	28.2%	22.7%	2.7%	3.9%	2.3%	3.4%	0%	0%	100%	100%
Hunting Pressure (Hunter days/km^2)	0.196	0.165	0.198	0.184	0.102	0.073	0.054	0.088	0.015	0.020	0.0	0.001	0.071	0.064
Hunter Success (Sharptail kill/all hunter day)	0.83	0.88	1.40	1.18	1.59	1.33	0.92	0.71	0.42	0.46	0.0	0.0	1.21	1.04

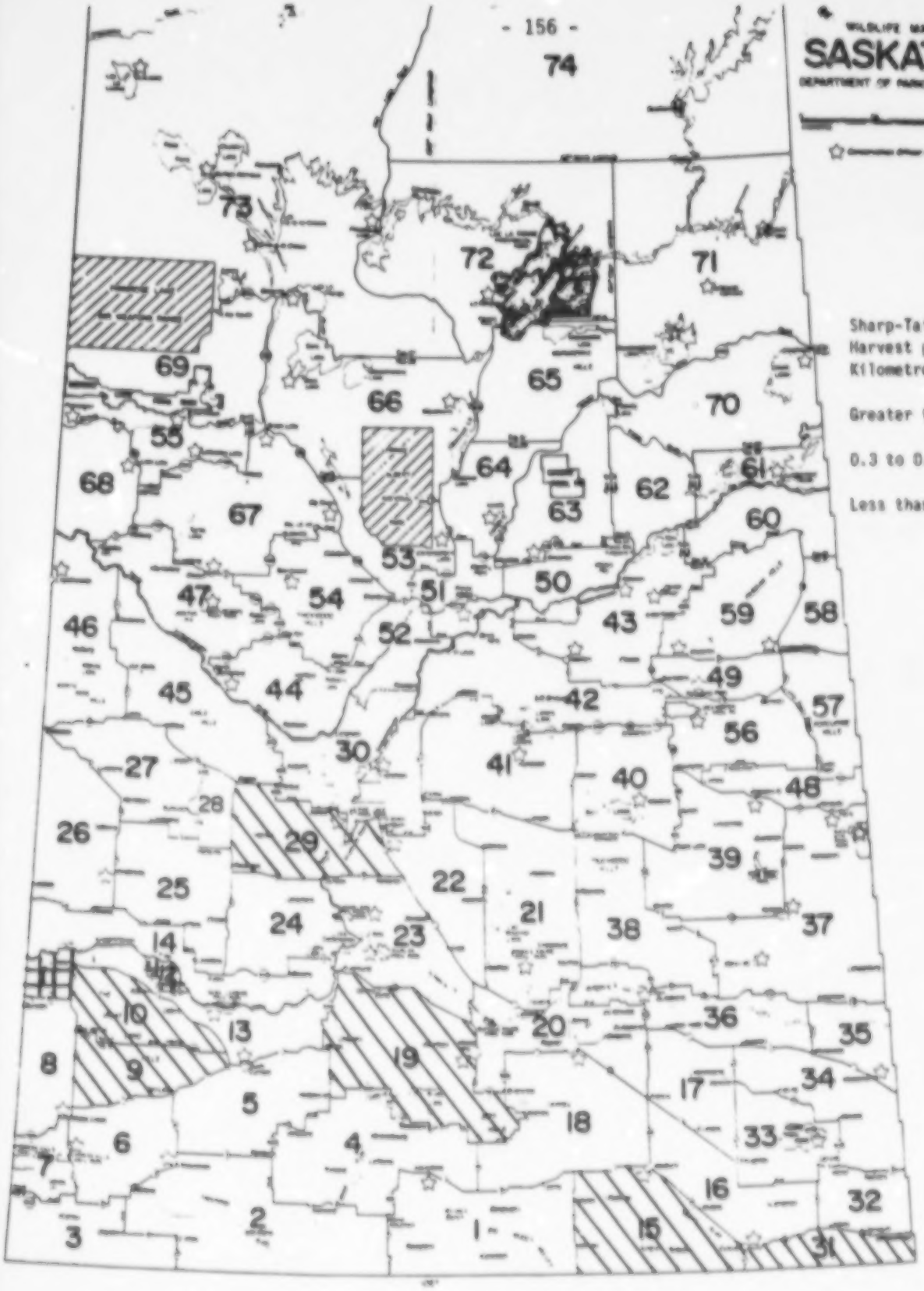


Figure 18. Sharp-tailed Grouse Harvest Density 1985.

Figure 19. Saskatchewan 1985 Sharp-tailed Grouse Harvest by Weekly Intervals

Table 87. Most Important Sharp-tailed Grouse Harvest Zones in Saskatchewan, 1984 vs 1985

	1984			1985		
Rank	Wild-life Mgmt. Zone	Sharptail Harvest/ Sq km Total Area	% of Provincial Harvest	Wild-life Mgmt. Zone	Sharptail Harvest/ Sq km Total Area	% of Provincial Harvest
1st	19	0.641	10.92	12	0.825	0.68%
2nd	11	0.588	1.07	11	0.501	1.18
3rd	15	0.486	6.04	19	0.466	10.28
4th	35	0.423	2.04	10	0.353	3.00
5th	31	0.421	1.96	9	0.345	2.84
Total for	Leading 5 Zones	0.540	22.03%	Leading 5 Zones	0.429	17.98

Note: 1984 + 1985 ranked only on harvest/gross area in zone.

1985 Sharp-tailed Grouse Reproduction

Sharptail reproduction, based on the young to adult ratio in a sample of the hunter harvest, increased provincially in 1985 to 1.71 juveniles per adult (Table 88, Figure 20, Appendix 16). This figure not only represents an increase of 75% over 1984, but also an increase of 23% over the 1975-1983 average, and 16% over the 1957-1983 long term average. In recent years, only 1982 has showed better reproduction on a province wide basis. Perhaps the most encouraging result is the rebound in reproduction in the grassland zones from 0.53 young/adult in 1984 to 1.08 in 1985. The 1985 grassland index is also slightly above (13%) the 1975-1983 average ratio.

1986 Sharp-tailed Grouse Breeding Population

The provincial population index for breeding sharp-tailed grouse is 1.57 males/km^2 (4.08 breeding males/mi^2) for 1986 (Table 89, Figure 21), an increase of 41% over 1985 levels for comparable survey areas. The Grassland, Farmland and Parkland surveys all reflect the provincial trend increase.

Provincially, sharptails have bounced back from low breeding numbers in 1985 to the levels they maintained in 1984. Both the Farmland and Parkland have shown slight increases in breeding populations from 1984 (7% and 8% respectively), while the 1986 Grassland totals are equal to those in 1984.

Survey blocks in the Farmland zones still continue to possess the highest over-all density of breeding males (2.08/km^2) (5.38/mi^2) and also the highest densities for individual survey areas. Duperow survey area showed a density of 4.96/km^2 (12.86 males/mi^2) and the Val Jean survey area had a density of 4.39/km^2 (11.37 males/mi^2).

Table 88. Sharp-tailed Grouse Reproduction in Saskatchewan, 1981 - 1985
(Based on Sample of Wings from Hunter-Killed Birds)

(Juvenile/Adult in Harvest)

Wildlife Management Division	1981	1982	1983	1975-83 1984	Average	% Change 1985	1985 from 1984	1985 from Average (1975-83)
Grassland	0.62	0.85	1.07	0.53	0.96	1.08	+ 103%	+13%
Farmland	0.81	2.19	1.62	1.06	1.54	1.94	+ 83%	+26%
Parkland	0.98	2.44	1.36	1.71	1.54	1.36	- 20%	-12%
Forest Fringe plus Forest	0.62	2.50	0.58 ***	2.33	2.04	8.67***	+ 272%***	+325%
PROVINCE	0.77	1.96	1.45	0.97	1.39 1.55**	1.71	+ 76%	+23% +16%**

** 1957-1983 Average

*** Sample less than 50 wings

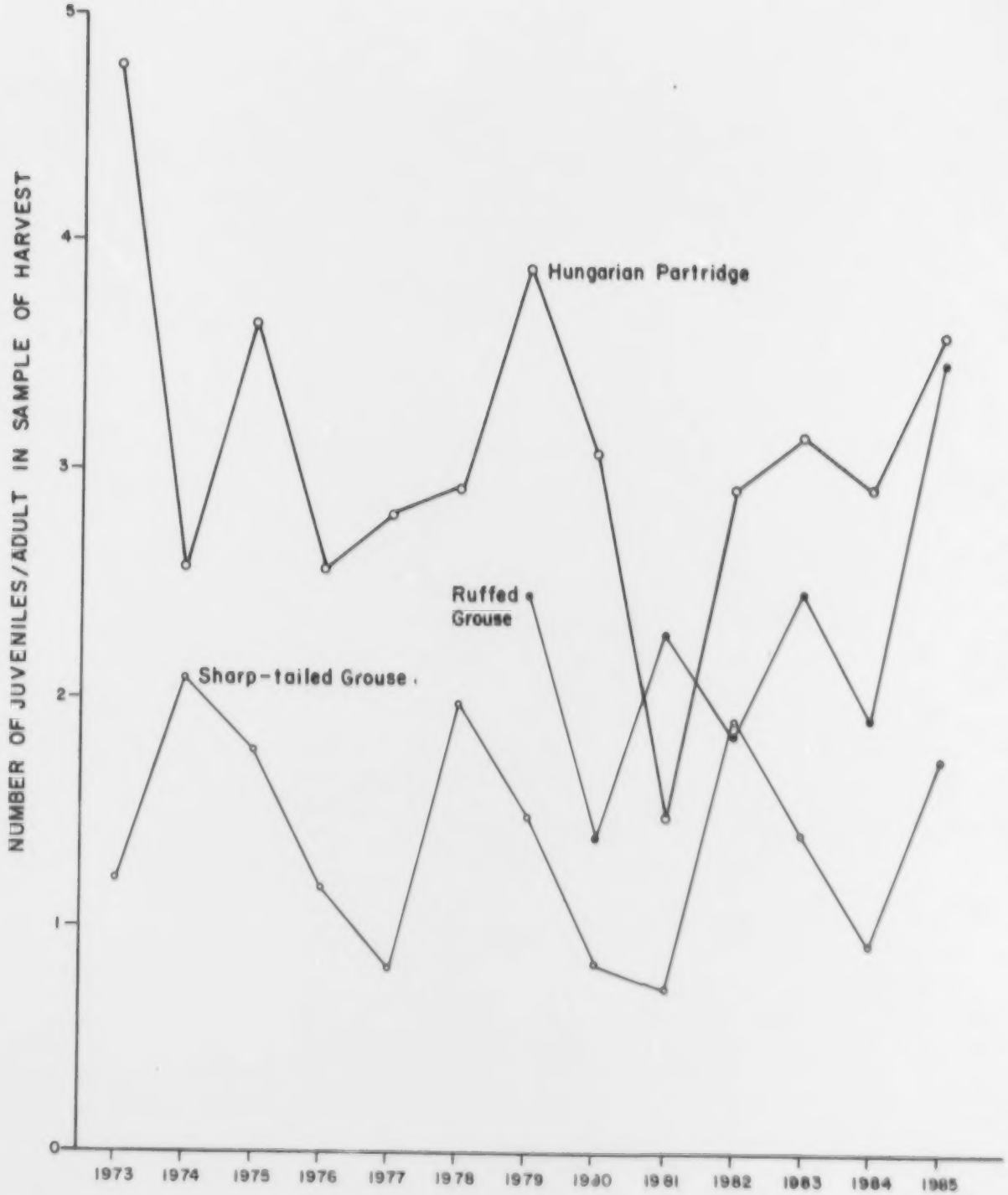


FIGURE 20. Saskatchewan upland game bird fall age ratios (reproduction index), 1973-1985

Table 89. Saskatchewan Sharp-tailed Grouse Breeding Populations Surveys, Spring 1986.

Wildlife Mgmt. Zone	Survey Area	Area Surveyed (Mile²)	Breeding Males Per Mile² 1984	1985	1986 No. of Active Dancing Grounds	1986 Breeding Males Per Mile²
1	Amulet	20	2.85	1.15	4	3.20
4	Meyronne	16	3.12	2.50	3	2.94
5	Turkey Track	16	New survey in '85	2.50	4	6.06
9	Bowies Ranch	19	New survey in '85	2.32	4	3.21
9	Webb	20	4.00	4.75	6	3.95
10	N. Great Sandhills	19	6.21	4.26	9	5.95
	GRASSLAND	110	4.07 -1%*	2.93 +43%**	30	4.19
15	Goodwater	18	9.44	5.66	10	8.22
15	Estevan-Cambria	16	New survey in '85	3.87	5	4.25
16	Wellington	17	New survey in '86		9	9.82
17	Indian Head South	16	3.18	2.37	4	4.31
19	Mortlach	20	7.65	5.10	5	4.20
19	Val Jean	19	New survey in '85	9.64	7	11.37
20	Bethune	27.5	2.29	1.41	5	1.67
21	Gibbs	16	4.75	2.68	3	3.31
21	Last Mtn. Lake	15	New survey in '85	1.66	6	4.13
22	Bradwell	24	---	1.95	4	2.12
23	Elbow	16	New survey in '85	5.75	7	7.25
24	Coteau	25	2.20	---	7	3.44
26	Alsask	19	4.68	3.78	8	6.47
28	Duperow	14	8.21	---	11	12.86
29	Goose Lake	21.5	3.07	2.79	6	3.95
30	Asquith	12	1.22	2.33	3	3.17
	FARMLAND	296	4.50 +7%*	3.72 +30%**	100	5.38
32	Carnduff	15	5.50	3.43	5	5.60
33	Tecumseh	20	6.45	4.30	10	7.50
34	Moosomin South	27	3.15	1.62	6	3.33
35	Spyhill	20.25	New survey in '85	3.62	7	5.43
37	Togo-Calder	13.5	4.40	3.70	4	2.30
38	Fort Block	24	3.67	2.58	7	3.42
39	Goodspirit	16	1.88	--	7	5.31
40	Quill Lakes	16	2.68 +8%*	2.31 +45%**	3	2.25
	PARKLAND	151.75	3.93 + 8*	2.97 +45**	49	4.40
PROVINCE	(30 survey areas)	557.75/mi² (1444.57/km²)	4.23/mi² (1.63/km²) +6*	3.33/mi² (1.29/km²) +41**	179	4.88/mi² (1.88/km²)

* Percent difference in 1986 density figures compared to 1984; based on comparable surveys.

** Percent difference in 1986 density figures compared to 1985; based on comparable surveys.

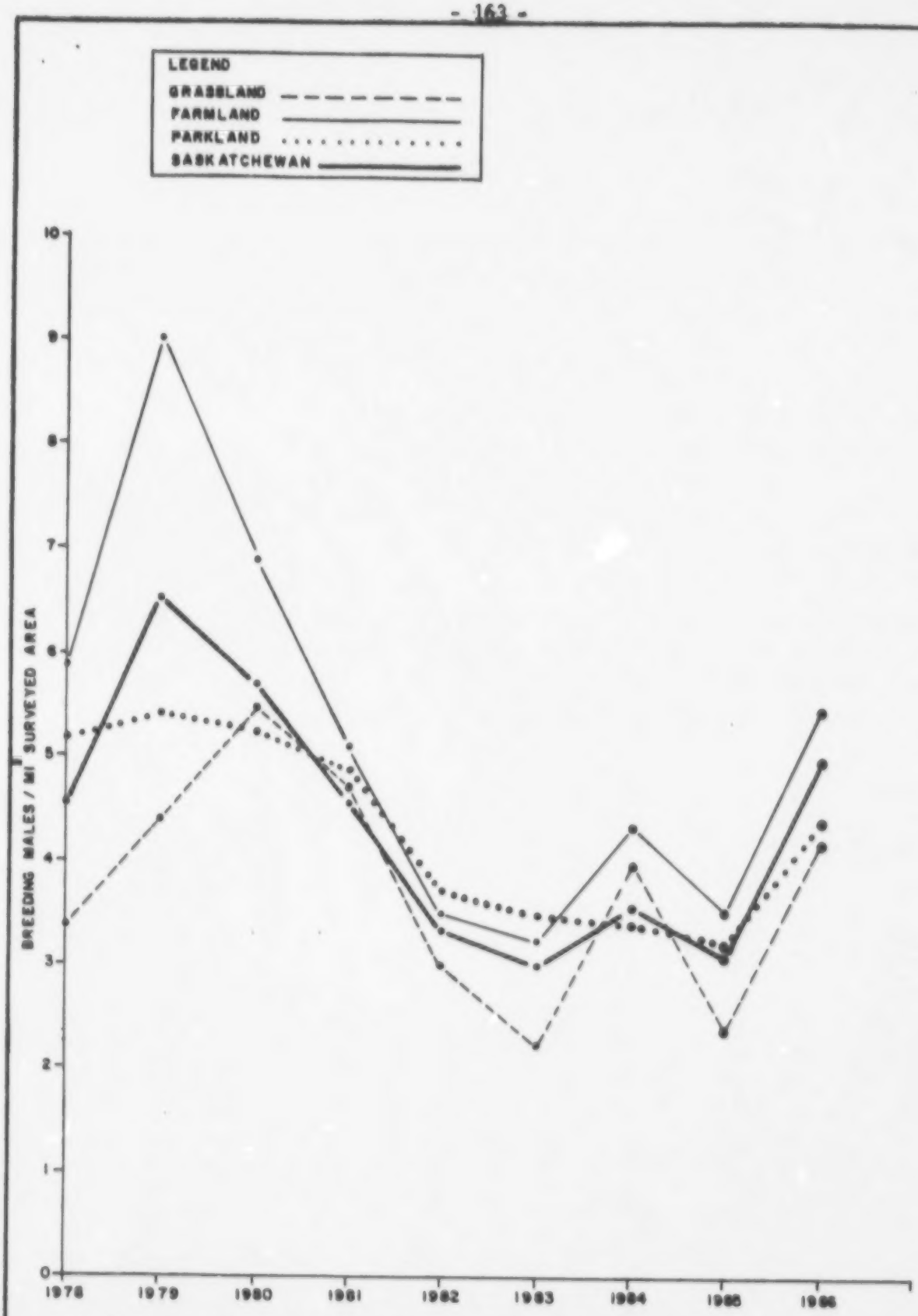


Fig. 21 Sharp-tailed grouse breeding population trends, 1978-1986

NOTE: 1984-86 Survey totals not directly comparable to 1983 due to game management zone changes (See Table 89)

Discussion - Sharp-tailed Grouse

The provincial sharptail population showed good brood production during the summer of 1985 despite the drought conditions in the southern half of the province. 1986 spring surveys also show an increase in the number of breeding males in 22 of the 26 comparable survey blocks. However numbers have only equalled those of the spring of 1984.

The nesting success and brood survival in 1986 is expected to be equal to 1985. Abundant spring rains should provide lush growth for nesting and brood cover.

Habitat loss due to breaking up of native pastures for farmland will continue to negatively impact sharp-tailed grouse populations.

To assess the impact of improved sharp-tailed grouse populations on hunter interest and harvest the recommendation is to maintain the same bag limits for sharp-tailed grouse in 1986. Although the proposal calls for similar bag limits to 1985, populations have recovered sufficiently to allow opening the southern zones one week earlier as they did traditionally. A September 22 opening will also coincide with the proposed opening date for Hungarian Partridge and Ruffed Grouse in southern zones.

1986 Sharp-tailed Grouse Hunting Regulations*

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 1-47 including Last Mountain Lake Wildlife Management Unit, and starting Sept. 29 Elbow, Estevan-Cambria and Lomond #3 Wildlife Management Units	Sept. 22 - Nov. 15	3 daily 6 possession
Zones 48-76 including Clear-Water River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne Wildlife Management Unit and Bronson Forest Recreation site	Sept. 8 - Nov. 29	3 daily 6 possession

* Non-residents of Canada may not hunt sharp-tailed grouse in Zones 9-14 and 25-28.

HUNGARIAN PARTRIDGE

1985 Hunting Activity and Harvest

For the third consecutive year, the reported Hungarian partridge harvest surpassed the sharp-tailed grouse harvest (Figure 17). About 42,000 partridge were harvested in the fall of 1985 which is 35% below the 1972-84 average (Tables 90, 91). The number of active partridge hunters decreased 17% to 12,900 but they harvested 3.3 birds per active hunter which is slightly above the 13-year average. Partridge hunters experienced 4% less success per day than average. The chronology and distribution of the harvest are given in Figures 22 and 23.

Harvest pressure in terms of birds harvested/km^2 decreased in the Grasslands to .26 from .31, and also in the Farmlands (.33 to .24) and Parklands (.10 to .04) (Table 92). The Farmlands continued to account for a high proportion of the total harvest (51% compared to 50% in 1984). Hunter success (harvest per upland hunter day) was better in the Grasslands with 1.56 birds per hunter day versus 1.28 birds per day in the Farmlands (Table 92).

The five top partridge zones in 1985 are listed in Table 93 and accounted for nearly half the provincial harvest. Zones 4, 5, 15 and 19 ranked in the top 5 in both 1984 and 1985.

1985 Hungarian Partridge Reproduction

Provincially the 1985 reproduction index, calculated from wing samples from the harvest is 3.60 young/adult, up 35% from the 1984 index of 2.67 (Table 94, Appendix 17). The Grassland index increased 60% to 3.40 from 2.13 in 1984. The 1985 Farmland index of 3.88 is 21% above the 1975-83 average of 3.2 young/adult and up 13% from 1984. The Parkland index of 3.67 is based on a sample size of only 14 wings but is probably more reliable than the index of 6.00 young per adult reported in 1983.

Table 90. Hungarian Partridge Hunting Data for Saskatchewan,* 1972 - 1985

Year	Hunting Level: Active Hungarian Partridge Hunters	Hunting Level: Total Upland Bird Hunter Days Zones 1-22 (1972-83) Zones 1-55 (1984-85)	Hunting Level: Hunter Days/ Active Hunter	Hunting Success: Hungarian Partridge Harvest	Hunting Success: Harvest/ Active Hunter	Hunting Success: Harvest/ Total Upland Hunter Day
1972	23,360	49,692	2.1	77,093	3.3	1.55
1973	20,741	50,827	2.5	74,668	3.6	1.47
1974 **	15,276	33,722	2.2	33,608	2.2	1.00
1975 **	17,356	39,353	2.3	45,125	2.6	1.15
1976 **	22,835	73,458	3.2	90,897	4.0	1.24
1977 **	25,535	78,289	3.1	93,616	3.7	1.20
1978	21,320	58,514	2.7	60,585	2.8	1.04
1979	21,041	59,801	2.8	69,127	3.3	1.16
1980	20,698	61,856	3.0	66,349	3.2	1.07
1981	19,617	57,149	2.9	64,349	3.3	1.13
1982	17,056	43,995	2.6	41,743	2.4	0.95
1983	19,014	54,452	2.9	61,073	3.2	1.12
1984	15,511	42,219*	2.7	59,794	3.9	1.42
1972-1984 Average	19,951	54,103	2.7	64,462	3.2	1.19
1985	12,867	36,889 *	2.9	41,998	3.3	1.14
% Change						
1985 from 1984	- 17%	- 13%	+ 7%	- 30%	- 15%	- 20%
1985 from Average	- 36%	- 32%	+ 7%	- 35%	+ 3%	- 4%

* Forest and Shield Divisions excluded because of insignificance to Hungarian partridge hunting. (No open season).
** Erroneous data was published for these years prior to 1979.

Table 91. Hungarian Partridge Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	1,980	4.71	382	0.238	2.0	1,000	450
2	1,515	3.61	553	0.142	1.3	1,205	447
3	107	0.26	68	0.025	1.9	58	26
4	4,181	9.95	962	0.515	1.8	2,364	1,033
5	3,148	7.50	839	0.528	1.7	1,910	945
6	240	0.57	176	0.057	1.1	214	88
7	105	0.25	59	0.055	0.9	123	38
8	344	0.82	133	0.101	1.3	267	100
9	1,461	3.48	477	0.425	1.8	805	366
10	1,201	2.86	540	0.339	1.5	822	316
11	118	0.28	76	0.120	0.5	251	35
12	126	0.30	115	0.367	0.9	138	47
13	1,346	3.21	510	0.330	1.6	836	427
14	796	1.90	446	0.143	1.2	673	241
GR	16,668	39.69	5,335	0.257	1.6	10,666	4,559
15	3,836	9.13	962	0.570	1.3	2,971	1,109
16	1,430	3.41	637	0.270	1.7	830	431
17	709	1.69	443	0.186	1.1	629	285
18	1,321	3.14	587	0.177	1.7	786	414
19	5,571	13.27	1,431	0.604	1.5	3,623	1,746
20	1,332	3.17	582	0.241	1.5	863	398
21	2,088	4.97	1,163	0.249	1.0	2,048	834
22	455	1.08	318	0.096	1.1	408	185
23	1,197	2.85	559	0.209	1.2	1000	457
24	855	2.04	559	0.177	1.3	673	319
25	482	1.15	276	0.083	1.5	330	127
26	313	0.75	238	0.071	1.1	299	119
27	240	0.57	221	0.049	1.0	245	79
28	134	0.32	101	0.099	0.7	187	53
29	828	1.97	659	0.155	0.9	978	339
30	651	1.55	694	0.090	0.8	850	281
FA	21,443	51.06	9,430	0.236	1.3	16,720	7,176
31	704	1.68	329	0.279	1.1	615	272
32	223	0.53	106	0.080	0.8	296	89
33	212	0.50	188	0.055	0.5	455	78
34	142	0.34	150	0.026	0.6	258	51
35	39	0.09	93	0.015	0.4	94	16
36	402	0.96	328	0.078	0.7	595	181
37	404	0.96	394	0.036	0.4	1,020	182
38	173	0.41	205	0.027	0.7	256	75
39	207	0.49	275	0.027	0.4	479	84
40	165	0.39	186	0.030	0.4	400	82
			T O T A L				

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
41	110	0.26	165	0.015	0.6	178	51
42	158	0.38	174	0.021	0.3	494	85
43	102	0.24	71	0.015	0.7	145	39
44	112	0.27	210	0.024	0.2	487	48
45	378	0.90	300	0.049	0.4	887	142
46	47	0.11	88	0.008	0.3	169	16
47	91	0.22	115	0.016	0.3	372	28
PA	3,670	8.74	3,327	0.037	0.5	7,201	1,520
48	47	0.11	24	0.019	0.3	189	20
49	5	0.01	5	0.002	0.0	181	5
50	0	0.00	16	0.000	0.0	248	0
51	24	0.06	71	0.008	0.1	199	8
52	24	0.06	71	0.008	0.1	319	8
53	47	0.11	32	0.017	0.2	256	20
54	47	0.11	71	0.008	0.1	433	24
55	24	0.06	8	0.006	0.1	477	8
FF	218	0.52	296	0.008	0.1	2,302	91
56	0	0.00	0	0.000	0.0	315	0
57	0	0.00	0	0.000	0.0	150	0
58	0	0.00	0	0.000	0.0	63	0
59	0	0.00	0	0.000	0.0	86	0
60	0	0.00	0	0.000	0.0	24	0
61	0	0.00	0	0.000	0.0	18	0
62	0	0.00	0	0.000	0.0	40	0
63	0	0.00	0	0.000	0.0	467	0
64	0	0.00	0	0.000	0.0	138	0
65	0	0.00	0	0.000	0.0	118	0
66	0	0.00	0	0.000	0.0	91	0
67	0	0.00	0	0.000	0.0	709	0
68	0	0.00	0	0.000	0.0	103	0
69	0	0.00	0	0.000	0.0	334	0
70	0	0.00	0	0.000	0.0	106	0
71	0	0.00	0	0.000	0.0	132	0
72	0	0.00	0	0.000	0.0	102	0
73	0	0.00	0	0.000	0.0	232	0
FO	0	0.00	0	0.000	0.0	3,230	0
74	0	0.00	0	0.000	0.0	4	0
75	0	0.00	0	0.000	0.0	8	0
76	0	0.00	0	0.000	0.0	16	0
MS	0	0.00	0	0.000	0.0	28	0
	41,998	100.00	18,289	0.006	1.1	40,145	13,247

* Hunter Days are based on all Upland Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

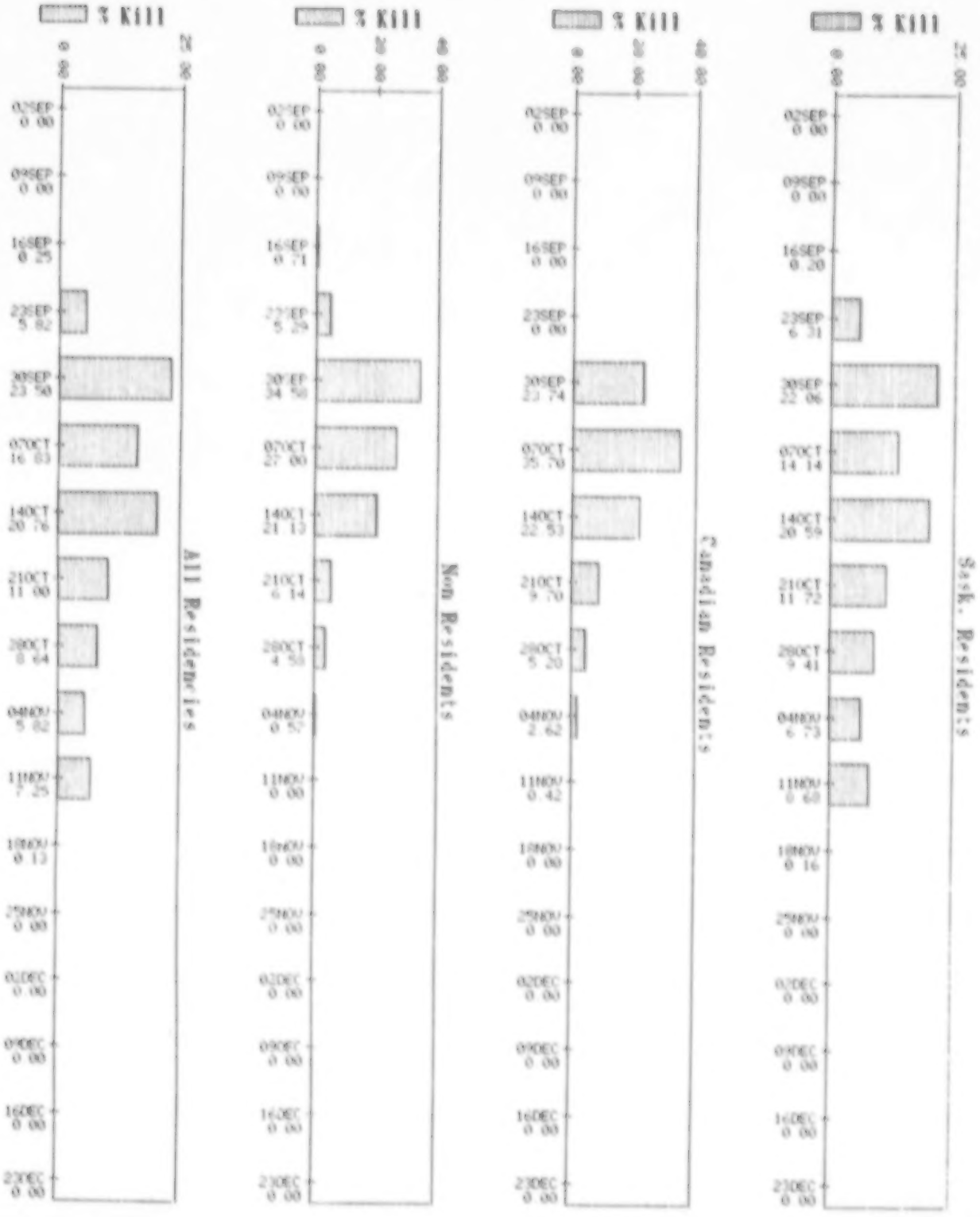


Figure 22. Saskatchewan 1985 Hungarian Partridge Harvest by Weekly Intervals

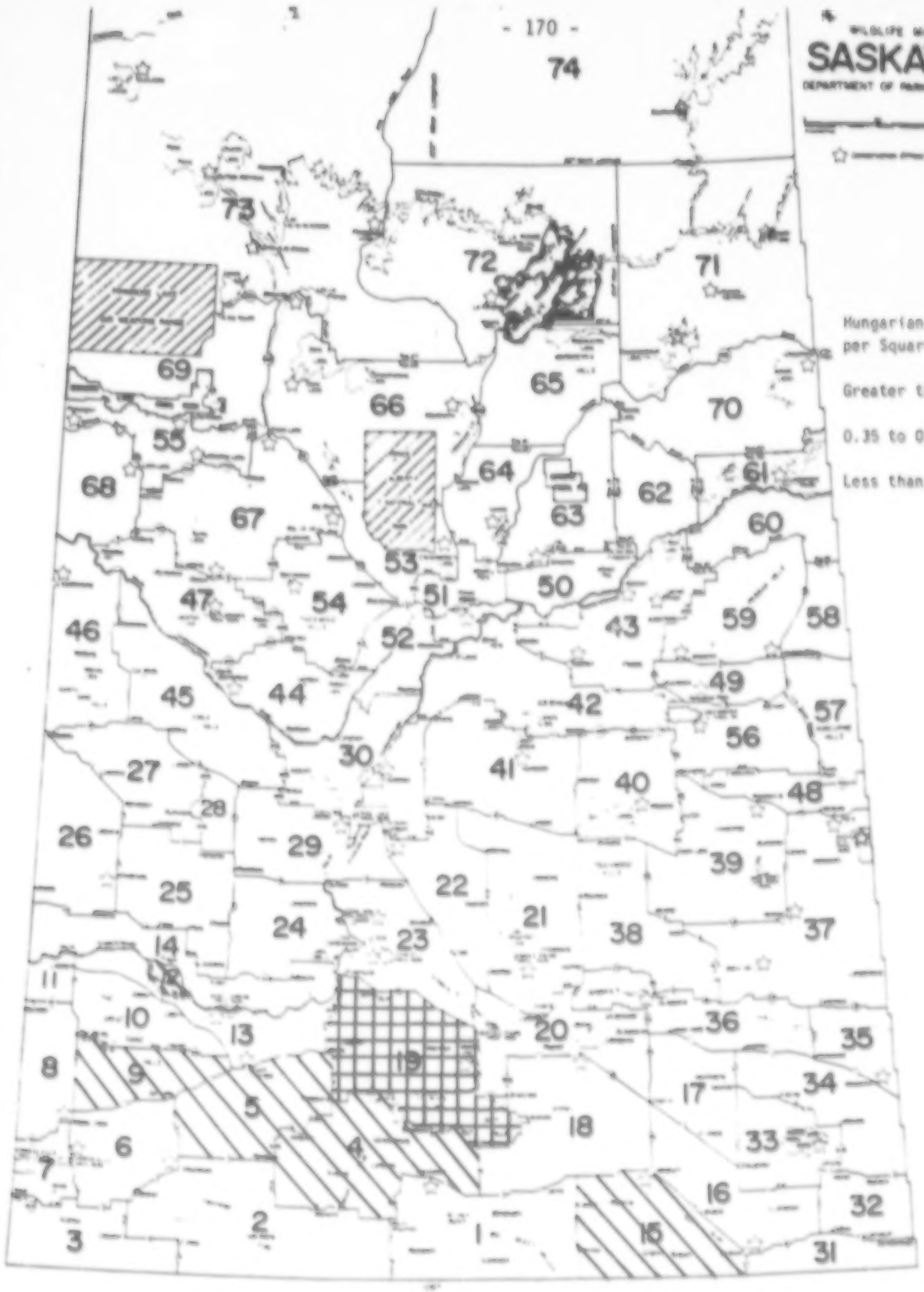


Figure 23. Saskatchewan Hungarian Partridge Harvest Density 1985.

Table 92. Hungarian Partridge Hunting Data for Saskatchewan by Ecological Divisions, 1984 vs 1985*

	Grassland Zones 1-14		Farmland Zones 15-30		Parkland Zones 31-47		Forest Fringe Zones 48-55		Province*	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
Harvest	20,024	16,668	29,832	21,443	9,561	3,670	337	218	59,754	41,998
(% of Total)	33.5%	39.7%	49.9%	51.1%	16.0%	8.7%	0.6%	0.5%	100%	100%
Harvest Pressure (kill/sq km)	0.309	0.257	0.328	0.236	0.097	0.037	0.013	0.008	0.213	0.150*
Upland Bird Hunter Days	12,717	10,666	18,010	16,720	10,066	7,201	1,426	2,302	42,219	36,889*
(% of Total)	30.1%	28.9%	42.7%	45.3%	23.8%	19.5%	3.4%	6.2%	100%	100%
Species Hunter Days (% of Total)	5,061	4,559	8,537	7,176	2,904	1,520	95	91	16,596	13,347
	30.5%	34.2%	51.4%	53.8%	17.5%	11.4%	0.6%	0.7%	100%	100%
Hunting Pressure (hunter days/ sq km)	0.196	0.165	0.198	0.184	0.102	0.073	0.054	0.068	0.151	0.132
Hunter Success (kill/hunter day)	1.57	1.56	1.66	1.28	0.95	0.51	0.24	0.09	1.42	1.14

* Forest and Northern Shield Divisions excluded from hunter days and area (km^2); Hungarian partridge are essentially absent from these areas and no partridge hunting is permitted there

Table 93. Most Important Hungarian Partridge Harvest Areas in Saskatchewan, 1984 vs 1985*

Rank *	1984 Wildlife Mgmt. Zone	1984 Kill/ sq km Total Area	1984 % of Provincial Harvest	1985 Wildlife Mgmt. Zone	1985 Kill/ sq km Total Area	1985 % of Provincial Harvest
1st	11	0.76	1.25	19	0.604	13.27
2nd	4	0.65	8.77	15	0.570	9.13
3rd	5	0.64	6.41	5	0.528	7.50
4th	15	0.62	6.98	4	0.515	9.95
5th	19	0.57	8.76	9	0.425	3.48
Total	Leading 5 Zones	0.62	32.17%	Leading 5 Zones	0.54	43.33%

* 1984 and 1985 data ranked according to harvest density, based on total area (km^2) of the zone.

Table 94. Hungarian Partridge Reproduction* in Saskatchewan, 1981 - 1985

Ecological Division	Juveniles/Adult in Harvest 1981	1982	1983	1984	1975-83 Average	1985	% Change 1985 from 1984	1985 from Average (1975-1983)
Grassland	1.4	5.0	2.37	2.13	2.8	3.40	+ 60%	+ 21%
Farmland	1.5	2.9	3.45	3.42	3.2	3.88	+ 13%	+ 21%
Parkland	N/A	N/A	6.00**	3.10	N/A	3.67**	+ 18%	Not available
PROVINCE	1.5	3.0	3.20	2.67	2.9 3.0***	3.60	+ 35%	+ 24% + 20%***

* Based on sample of wings from hunter-killed birds.

** Sample size less than 50 wings.

*** 1957-83 Average

1986 Hungarian Partridge Breeding Population

Spring surveys of 346 abandoned farmsteads show a provincial index of 0.51 pair of partridge per farmstead (Table 95), up 53% for comparable areas surveyed in 1985 and equivalent to 1984 populations. The above-average reproduction in the summer of 1985 in the Grasslands, Farmlands and Parklands and the mild winter of 1985-86 have obviously played an important role in the recovery of the partridge in the Farmlands and Parklands.

Summary

The 1986 spring counts are reason for cautious optimism. A return to 1984 bag limits of 10 birds daily in Zones 15, 18 and 31 is warranted due to recovered populations. Zones 27 to 29 can also readily withstand a bag limit of 5 birds per day.

Hungarian partridge hunting and harvest decreased slightly in 1985 to below the 13-year average. It is felt this reduction was mainly due to reduced hunter activity as a result of lowering the sharp-tailed grouse bag limit and lower populations in the Farmlands and Parklands. The recovery of populations should lead to a banner year for partridge hunters.

1986 Hunting Regulations - Hungarian Partridge*

WMZ Open	(Inclusive)	Bag Limit
Zones 1-15, 18, 19 and 31 and starting Sept. 29, Estevan-Cambria and Lomond #3 (at Maxim) Wildlife Management Units.	Sept 22 - Nov 15	10 daily 20 possession
Zones 16, 17 and 20-29, including Last Mountain Lake Wildlife Management Unit and starting Sept. 29, Elbow Wildlife Management Unit.	Sept 22 - Nov 15	5 daily 10 possession
Zones 30 and 32-55, including Fort a la Corne Wildlife Management Unit	Sept 22 - Nov 15	3 daily 6 possession

* Non-residents of Canada may not hunt Hungarian partridge in Zones 9-14 and 25-28.

Table 95. Hungarian Partridge Breeding Population Survey, Spring 1986

Wildlife Management Zone	1984 Number of Farmsteads Surveyed	1984 Pairs per Farmstead	1985 Number of Farmsteads Surveyed	1985 Pairs per Farmstead	1986 Number of Farmsteads Surveyed	1986 Pairs per Farmstead
1	—	—	15	0.80	20	1.50
4	24	0.52	26	1.03	41	0.80
9	—	—	15	0.67	15	0.67
10	4	0.50	11	0.63	15	0.27
14	11	0.73	—	—	18	0.33
GRASSLAND	39	0.56	67	0.84	109	0.76
		+4%*		+1%**		
15	20	.035	19	0.21	19	0.53
18	9	0.00	27	0.22	10	0.90
19	—	—	20	0.50	12	0.50
20	4	0.25	16	0.19	16	0.25
21	20	0.65	20	0.10	20	0.25
22	—	—	16	0.12	18	0.33
23	30	0.80	20	0.40	20	0.55
24	—	—	20	0.15	20	0.45
25	15	0.53	15	0.26	15	0.27
26	7	0.28	15	0.20	15	0.40
29	—	—	—	—	19	0.42
FARMLAND	105	0.52	188	0.24	184	0.42
		-17%*		+75%**		
31	—	—	—	—	11	0.82
32	—	—	20	0.00	17	0.24
37	—	—	10	0.00	10	0.10
38	20	0.15	12	0.08	15	0.20
PARKLAND	20	0.15	42	0.02	53	0.32
		+33%*		+850%**		
PROVINCE	164	0.49	297	0.34	346	0.51
		-6%*		+53%**		

* % difference in 1986 density figures compared to 1984; based on surveys done in comparable zones.

** % difference in 1986 density figures compared to 1985 based on surveys done in comparable zones.

PHEASANT

1985 Hunting Activity and Harvest

Only 3,700 Saskatchewan pheasant hunters participated in the traditional early and late pheasant seasons in 1985 compared to 4,975 in 1984 (Appendix 8, 10e). Active pheasant hunters harvested 7,085 cock pheasants which is 42% below the nine-year average (Tables 96, 97; Figure 24). Active hunters decreased by 26% and pheasant hunter days dropped by nearly 32%. Hunting success in terms of cocks harvested per hunter day decreased 15% to 2.13 birds per day which is 16% above the 9-year average of 1.83 (Table 96).

Zone 15 and Zone 4 were the most important pheasant hunting areas (Table 98, Figure 25) providing 54% of the harvest and 54% of pheasant hunter recreation days. Zones 2 and 5 provided 27% of the harvest. Hunter success was virtually equal in Zones 2, 4 and 15 with 2.15 cocks harvested per hunter day. Less hunters took advantage of the late season, with only 9% of the reported 1985 harvest occurring after December 2 (Figures 17, 26). This compares to about 25% of the harvest occurring after November 7 in 1983 and 13% in 1984. About 33% of the total harvest occurred during the opening week (October 2-7) compared to 34% in 1983 and 44% in 1984.

1986 Breeding Populations - Pheasant

The winter of 1985-86 was relatively mild and free of snow throughout most of the pheasant range although some of the drainages were blown in with snow and drifting soil. Population levels are similar to that of last year. The provincial spring breeding index has decreased to 1.78 crows heard per survey stop (Table 99, Figure 27). This is only a 7% reduction from 1985 but a 39% reduction from 1984, based on comparable surveys. Although several survey areas showed small increases in the number of breeding males over 1985 figures, only the Swift Current - Duncairn and Radville East routes showed upward trends from levels displayed during 1984 spring surveys. Grasses and shrubs in drainages are in poor condition due to the droughts of 1981-1985 and offer reduced cover for nesting hens and escape for young broods.

Since populations remain depressed through most of the pheasant range, the reduced bag limit implemented in 1985 will again be imposed for 1986.

Table 96. Pheasant Hunting Data for Saskatchewan,* 1976-1985

	Hunting Level				Hunting Success	
Year	Active Pheasant Hunters	Pheasant Hunter Days	Pheasant Hunter Days/ Active Hunter	Pheasant Harvest	Pheasants Harvested/ Active Pheasant Hunter	Pheasants Harvested/ Pheasant Hunter Day
1976	4,619	7,421	1.6	14,488	3.1	1.95
1977	5,726	9,718	1.7	19,097	3.3	2.05
1978	4,476	6,107	1.4	10,165	2.3	1.66
1979	3,441	4,390	1.3	7,060	2.1	1.61
1980	4,150	5,876	1.4	11,823	2.8	2.01
1981	4,825	7,052	1.5	12,536	2.6	1.78
1982	3,915	5,772	1.5	7,511	1.9	1.30
1983	6,348	9,313	1.5	15,857	2.5	1.70
1984	4,975	4,870	1.0	12,182	2.4	2.50
1976-1984 Average	4,719	6,724	1.4	12,302	2.6	1.83
1985	3,704	3,325	0.9	7,084	1.9	2.13
% Change						
1985 from 1984	- 26%	- 32%	- 10%	- 42%	- 21%	- 15%
1985 from Average	- 22%	- 51%	- 36%	- 42%	- 27%	+ 16%

* Prior to 1984 only Game Management Zones 1 to 17 were open for pheasant hunting. In 1984 and 1985 new WMZ 1 to 36 were open.

Table 97. Saskatchewan Pheasant Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	213	3.00	165	0.026	0.2	1,000	114
2	875	12.35	567	0.082	0.7	1,205	406
3	24	0.33	47	0.006	0.4	58	8
4	1,860	26.25	1,017	0.229	0.8	2,364	867
5	1,032	14.57	583	0.173	0.5	1,910	504
6	24	0.33	79	0.006	0.1	214	8
7	134	1.89	55	0.071	1.1	123	51
8	55	0.78	71	0.016	0.2	267	24
9	0	0.00	32	0.000	0.0	805	0
10	0	0.00	8	0.000	0.0	822	0
11	126	1.78	95	0.128	0.5	251	51
12	8	0.11	16	0.023	0.1	138	4
13	118	1.67	150	0.029	0.1	836	63
14	229	3.23	252	0.041	0.3	673	110
GR	4,696	66.30	3,136	0.072	0.4	10,666	2,210
15	1,978	27.92	756	0.294	0.7	2,971	922
16	47	0.67	126	0.009	0.1	830	24
17	0	0.00	32	0.000	0.0	629	0
18	87	1.22	126	0.012	0.1	786	47
19	95	1.33	213	0.010	0.0	3,623	47
20	55	0.78	102	0.010	0.1	863	24
21	0	0.00	24	0.000	0.0	2,048	0
22	0	0.00	0	0.000	0.0	408	0
23	0	0.00	47	0.000	0.0	1000	0
24	8	0.11	24	0.002	0.0	673	4
25	0	0.00	24	0.000	0.0	330	0
26	8	0.11	24	0.002	0.0	299	4
27	0	0.00	0	0.000	0.0	245	0
28	0	0.00	0	0.000	0.0	187	0
29	24	0.33	32	0.004	0.0	978	8
30	0	0.00	16	0.000	0.0	850	0
FA	2,301	32.48	1,544	0.025	0.1	16,720	1,080
31	71	1.00	118	0.028	0.1	615	32
32	0	0.00	24	0.000	0.0	296	0
33	0	0.00	0	0.000	0.0	455	0
34	0	0.00	8	0.000	0.0	258	0
35	0	0.00	32	0.000	0.0	94	0
36	16	0.22	16	0.003	0.0	595	4
37	0	0.00	0	0.000	0.0	1,020	0
38	0	0.00	0	0.000	0.0	256	0
39	0	0.00	0	0.000	0.0	479	0
40	0	0.00	0	0.000	0.0	400	0
>>>>>>>>>>>>>>>>>>>>	T O T A L					>>>>>>>>>>>>>>>>>>>>	
	7,084	100.00	4,878	0.001	0.2	40,145	3,325
41	0	0.00	0	0.000	0.0	178	0
42	0	0.00	0	0.000	0.0	494	0
43	0	0.00	0	0.000	0.0	145	0
44	0	0.00	0	0.000	0.0	487	0
45	0	0.00	0	0.000	0.0	887	0
46	0	0.00	0	0.000	0.0	169	0
47	0	0.00	0	0.000	0.0	372	0
PA	87	1.22	197	0.001	0.0	7,201	35
48	0	0.00	0	0.000	0.0	189	0
49	0	0.00	0	0.000	0.0	181	0
50	0	0.00	0	0.000	0.0	248	0
51	0	0.00	0	0.000	0.0	199	0
52	0	0.00	0	0.000	0.0	319	0
53	0	0.00	0	0.000	0.0	256	0
54	0	0.00	0	0.000	0.0	433	0
55	0	0.00	0	0.000	0.0	477	0
FF	0	0.00	0	0.000	0.0	2,302	0
56	0	0.00	0	0.000	0.0	315	0
57	0	0.00	0	0.000	0.0	150	0
58	0	0.00	0	0.000	0.0	63	0
59	0	0.00	0	0.000	0.0	86	0
60	0	0.00	0	0.000	0.0	24	0
61	0	0.00	0	0.000	0.0	18	0
62	0	0.00	0	0.000	0.0	40	0
63	0	0.00	0	0.000	0.0	467	0
64	0	0.00	0	0.000	0.0	138	0
65	0	0.00	0	0.000	0.0	118	0
66	0	0.00	0	0.000	0.0	91	0
67	0	0.00	0	0.000	0.0	709	0
68	0	0.00	0	0.000	0.0	103	0
69	0	0.00	0	0.000	0.0	334	0
70	0	0.00	0	0.000	0.0	106	0
71	0	0.00	0	0.000	0.0	132	0
72	0	0.00	0	0.000	0.0	102	0
73	0	0.00	0	0.000	0.0	232	0
FO	0	0.00	0	0.000	0.0	3,230	0
74	0	0.00	0	0.000	0.0	4	0
75	0	0.00	0	0.000	0.0	8	0
76	0	0.00	0	0.000	0.0	16	0
NS	0	0.00	0	0.000	0.0	28	0

* Hunter Days are based on all Upland Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

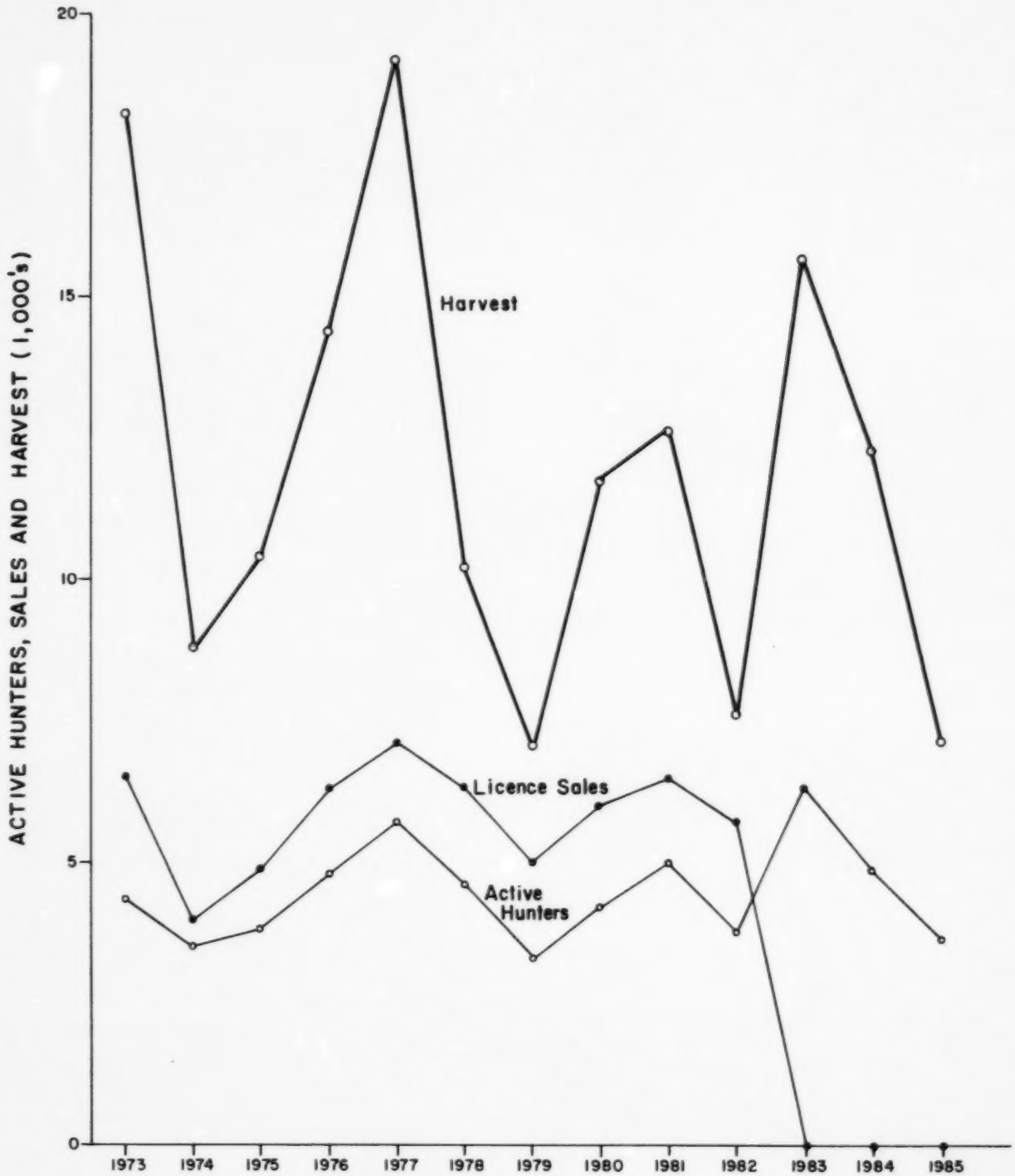


Figure 24. Saskatchewan pheasant licence sales, hunting and harvest, 1973–1985. (Separate pheasant licence not required in 1983–85)

Table 98. Important Pheasant Hunting Zones in Saskatchewan,* 1984 vs 1985

	Zone 4		Zone 2		Zone 5		Zone 15		Totals (4 Zones)		Province *	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
Harvest (% of Total)	4,169 (34%)	1,860 (26%)	2,145 (18%)	875 (12%)	1,809 (15%)	1,032 (14.6%)	1,600 (13%)	1,978 (28%)	9,723 (80%)	5,745 (81%)	12,182 (100%)	7,084 (100%)
Harvest Pressure (kill/sq km)	.514	.229	.202	.082	.303	.173	.238	.294	.31	.18	.07	.04
Pheasant Hunter Days (% of Total)	1,731 (35.5%)	867 (26%)	782 (16%)	406 (12%)	647 (13%)	504 (15%)	702 (13%)	922 (28%)	3,862 (79%)	2,699 (81%)	4,870 (100%)	3,325 (100%)
Hunting Pressure (hunter days/ sq km)	.21	.11	.07	.04	.11	.08	.14	.14	.12	.09	.03	.02
Hunter Success (kill/hunter day)	2.41	2.15	2.74	2.16	2.80	2.05	2.28	2.15	2.52	2.13	2.50	2.13

* Province defined as Zones 1-36, the only ones in which a pheasant hunting season is held.

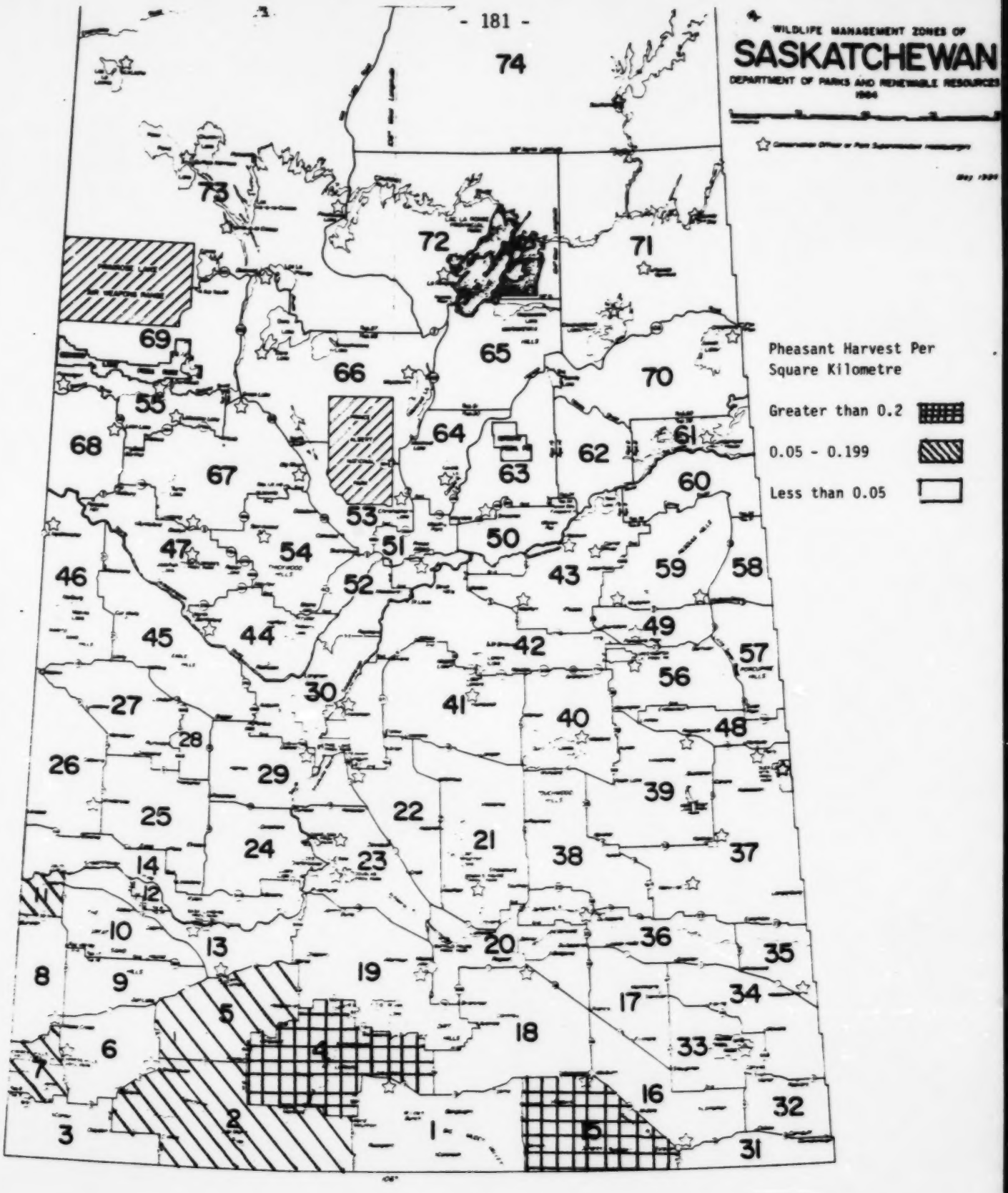


Figure 25. Saskatchewan Pheasant Harvest Density 1985 (Zone 1 -36 open only)

Figure 26. Saskatchewan 1985 pheasant harvest by weekly intervals

Table 99. Saskatchewan Pheasant Breeding Population Surveys, Spring 1986

Wildlife Stop Management Zone	Survey Route	Survey Stops	Crows Heard/Survey 1984	1985	1986
2	Val Marie	20	—	2.90	2.75
4	Woodrow Southwest	20	—	—	1.40
4	Bateman-Coderre	20	2.50	2.65	1.15
4	Cadillac-Ponteix	18	—	1.11	0.84
4	Pinto Creek	20	—	0.90	1.05
4	Notekeu Creek	20	3.85	1.25	2.25
5	Swift Current-Duncairn	20	1.15	1.05	1.95
6	Eastend	17	—	1.45	1.06
8	Maple Creek North	15	5.87	3.46	1.80
14	Estuary-Chesterfield	20	4.20	3.05	2.70
14	Snakebite	20	3.50	1.70	2.75
GRASSLAND		210	3.41	1.93	1.81
			-38*	-2**	
15	Radville East	20	1.35	1.55	1.90
19	Moose Jaw South	20	4.20	2.40	1.30
FARMLAND		40	2.78	1.98	1.60
			-42*	-19**	
PROVINCE		250	3.24	1.94	1.78
			-39*	-7**	

* % difference in 1986 density figures compared to 1984; based on comparable survey areas.

** % difference in 1986 density figures compared to 1985; based on comparable survey areas.

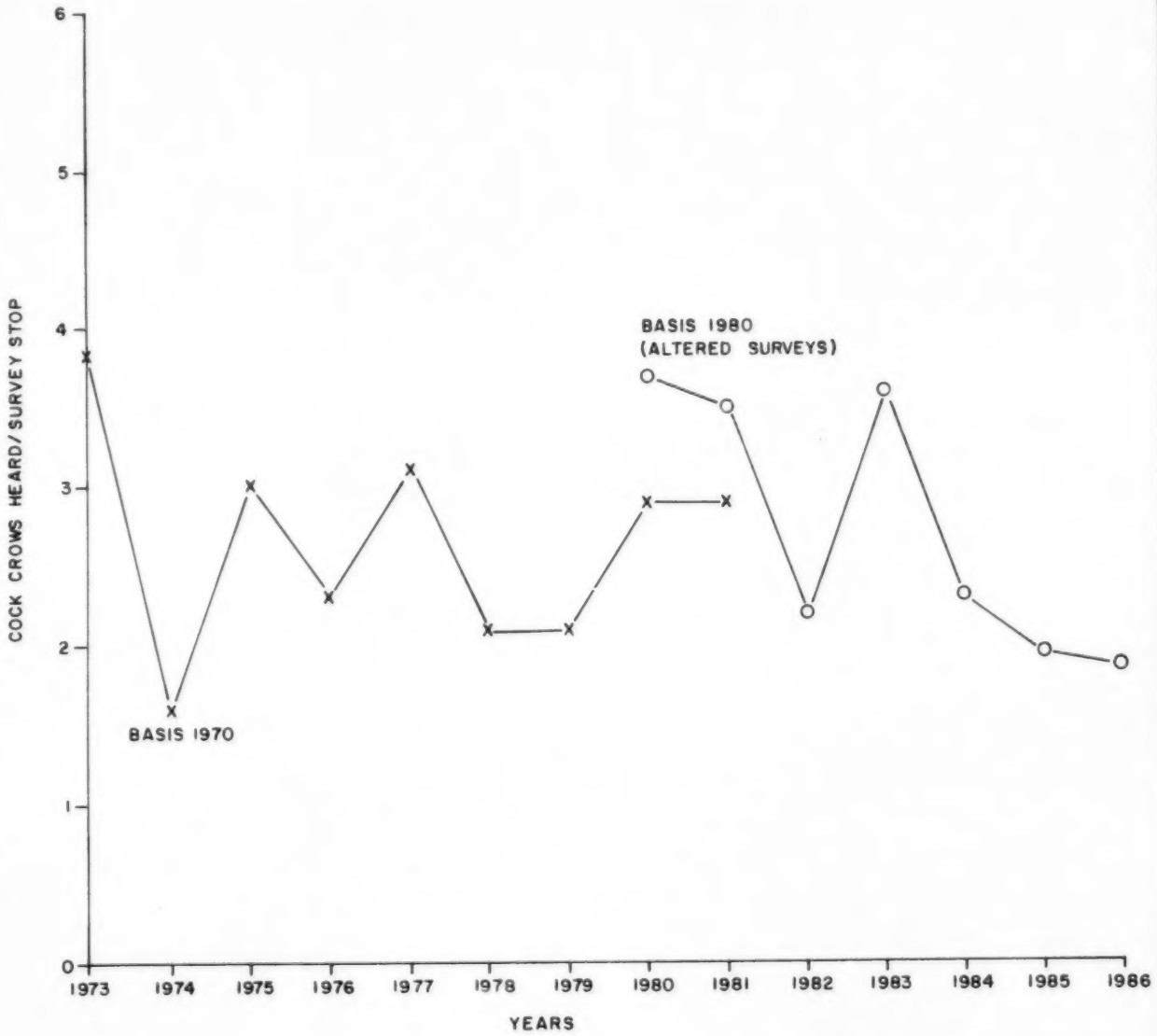


Figure 27. Saskatchewan Pheasant Spring Breeding Population Index 1973-1986

NOTE: 1984 Survey Index Not Directly Comparable To 1983 Due To Non-Comparable Survey Routes.

Summary

The 1985 pheasant harvest was 42% below the 1976-84 average. Active hunters and recreation days were reduced in 1985 due to perceived lower populations and an early winter. The 1986 spring breeding index is equal to 1985 levels but down significantly from 1984. The 1984-85 winter and droughts since 1981 have contributed to reduced pheasant populations. Season dates allow pheasant hunting up to the opening of white-tailed deer season but the traditional late pheasant season in December has been cancelled for 1986.

1986 Pheasant Hunting Regulations *

The 1986 regulations are essentially unchanged from those of 1985 except for a cancellation of the late season to reduce hunting pressure slightly. Members of the Game Advisory strongly recommended dropping the late season for 1986 due to low pheasant populations.

The analysis of the vehicle restriction proposal outlined in 1983 for portions of the pheasant range indicated that some posted land would be opened to walk-in pheasant hunters if vehicles were restricted. Rather than institute vehicle restrictions, SPRR prefers to urge hunters to seek permission to hunt and to walk for pheasants and to have affected landowners post their land with the conditional access signs provided free-of-charge by the department.

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 1-36, including Elbow, Estevan-Cambria and Lomond #3 (at Maxim) Wildlife Management Units	Oct 1 - Nov 15	3 daily 6 possession

RUFFED GROUSE

1985 Hunting Activity and Harvest

In spring 1983, it was thought that ruffed grouse had reached their lowest ebb in the apparent 10-year cycle of the population. Hunter harvest continued to decline in 1984, however, with the harvest dropping to 13,000 birds, the lowest since 1973 when only 12,700 birds were harvested (Tables 100, 101). In 1985, however, the ruffed grouse harvest increased to 15,000 indicating that populations are finally on the rebound.

Only 6,425 active ruffed grouse hunters pursued their quarry in response to the low population levels. Hunting success was up 21% from 1984 but remained 39% below the 1972-84 average of 3.8 birds per active hunter. Harvest pressure (kill/km^2) was heaviest in the Forest Fringe Zones with .15 birds harvested/km^2 of area (1 bird for every 6.5 km^2) (Table 102). The Forest Zones accounted for 35% of the provincial harvest and 29% came from the Parkland Zones. Harvest/km^2 is depicted in Figure 28. The chronology of the ruffed grouse harvest is shown in Figure 29.

Zone 55 (Meadow Lake area) ranked first in terms of ruffed grouse harvested/km^2 of total area (Table 103). Most of the harvest came from Zone 67 (9.6%) with Zones 55 and 37 ranking second and third with 5.85 and 5.70 percent of the harvest respectively.

1985 Reproduction - Ruffed Grouse

The 1985 provincial index for reproduction is 3.45 juveniles per adult based on a sample of 494 bird wings from the 1985 harvest (Table 104, Appendix 18). This is 64% above the 1979-83 average. The Parkland index of 3.62 juveniles per adult is double the 1984 levels and Forest populations show a similar increase.

1986 Ruffed Grouse Breeding Population

1986 spring drumming surveys indicate generally better populations with significant recovery in Zones 47-69. The index is up 42% for comparable survey routes in Forest Fringe Zones and 10% for Forest Zones (Table 105). The provincial breeding index of 1.17 drums heard per survey stop is up 6% for comparable surveys but the index is negatively influenced by Parkland surveys where the cycle appears to be out of synchrony with Forest Zones. A new survey in the Bulyea area of Zone 21 (1.2 drums per stop) indicates a ruffed grouse population equivalent to some zones in the Forest ecological division.

Table 100. Ruffed Grouse Hunting Data for Saskatchewan, 1972-1985

Year	Hunting Level: Active Ruffed Grouse Hunters	Hunting Level: Total All Upland Bird Hunter Days	Hunting Level: All Hunter Days/ Active Ruffed Grouse Hunter	Hunting Success: Ruffed Grouse Harvest	Hunting Success: Ruffed Grouse Harvested/Active Ruffed Grouse Hunter	Hunting Success: Ruffed Grouse Harvested/ Total Upland Hunter Days
1972	11,057	56,534	5.1	29,853	2.7	0.5
1973	9,102	53,275	5.9	12,743	1.4	0.2
1974 *	7,477	37,801	5.1	14,205	1.9	0.4
1975 *	12,091	48,161	4.0	36,274	3.0	0.8
1976 *	14,782	86,525	5.9	83,805	5.7	1.0
1977 *	17,757	93,496	5.3	94,353	5.3	1.0
1978	17,042	72,380	4.2	94,203	5.5	1.3
1979	17,545	72,096	4.1	86,309	4.9	1.2
1980	18,363	75,578	4.1	91,514	5.0	1.2
1981	14,466	68,989	4.8	36,711	2.5	0.5
1982	10,215	50,382	4.9	16,886	1.7	0.3
1983	8,754	60,146	6.9	13,523	1.5	0.2
1984	6,706	44,854	6.7	12,974	1.9	0.29
1972-1984 Average	12,720	63,093	5.0	47,950	3.8	0.76
1985	6,427	40,148	6.2	15,074	2.3	0.38
% Change						
1985 from 1984	- 4%	- 10%	- 7%	+ 16%	+ 21%	+ 31%
1985 from Average	- 49%	- 36%	+ 24%	- 69%	- 39%	- 50%

* Data published for these years was erroneous prior to 1979 correction.

Table 101. Ruffed Grouse Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days	WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	32	0.21	39	0.004	0.0	1,000	12	41	39	0.26	93	0.005	0.2	178	8
2	24	0.16	39	0.002	0.0	1,205	12	42	348	2.31	333	0.047	0.7	494	208
3	8	0.05	8	0.002	0.1	58	4	43	110	0.73	142	0.016	0.8	145	51
4	0	0.00	47	0.000	0.0	2,364	0	44	218	1.44	186	0.048	0.5	487	139
5	98	0.65	49	0.016	0.1	1,910	32	45	299	1.99	251	0.039	0.3	887	162
6	16	0.10	24	0.004	0.1	214	4	46	244	1.62	123	0.041	1.4	169	79
7	0	0.00	8	0.000	0.0	123	0	47	652	4.32	241	0.114	1.8	372	177
8	63	0.42	32	0.019	0.2	267	47	PA	4,410	29.25	3,269	0.045	0.6	7,201	1,828
9	29	0.19	27	0.008	0.0	805	10								
10	49	0.33	30	0.014	0.1	822	31	48	520	3.45	158	0.205	2.8	189	150
11	0	0.00	0	0.000	0.0	251	0	49	279	1.85	90	0.117	1.6	181	101
12	24	0.16	16	0.069	0.2	138	8	50	378	2.51	158	0.113	1.5	248	138
13	45	0.30	27	0.011	0.1	836	19	51	244	1.62	189	0.085	1.2	199	91
14	0	0.00	21	0.000	0.0	673	0	52	448	2.97	232	0.154	1.4	319	144
GR	386	2.56	366	0.006	0.0	10,666	180	53	504	3.35	221	0.182	2.0	256	162
								54	780	5.18	353	0.137	1.8	433	248
15	22	0.15	77	0.003	0.0	2,971	22	55	883	5.85	281	0.235	1.9	477	288
16	86	0.57	60	0.016	0.1	830	21	FF	4,037	26.78	1,681	0.154	1.8	2,302	1,320
17	126	0.84	102	0.033	0.2	629	55								
18	39	0.26	55	0.005	0.1	786	8	56	686	4.55	252	0.145	2.2	315	213
19	70	0.46	76	0.008	0.0	3,623	31	57	186	1.24	139	0.056	1.2	150	67
20	39	0.26	110	0.007	0.1	863	28	58	134	0.89	47	0.060	2.1	63	55
21	361	2.39	261	0.043	0.2	2,048	148	59	87	0.58	71	0.015	1.0	86	35
22	0	0.00	16	0.000	0.0	408	0	60	55	0.37	39	0.014	2.3	24	16
23	24	0.16	47	0.004	0.0	1000	8	61	44	0.29	35	0.015	2.4	18	18
24	0	0.00	21	0.000	0.0	673	0	62	39	0.26	36	0.011	1.0	40	20
25	0	0.00	16	0.000	0.0	330	0	63	362	2.40	178	0.064	0.8	467	146
26	0	0.00	32	0.000	0.0	299	0	64	134	0.89	118	0.038	1.0	138	59
27	35	0.23	44	0.007	0.1	245	14	65	165	1.10	55	0.025	1.4	118	32
28	16	0.10	16	0.012	0.1	187	8	66	221	1.47	74	0.020	2.4	91	51
29	24	0.16	99	0.004	0.0	978	16	67	1,442	9.57	355	0.166	2.0	709	441
30	102	0.68	170	0.014	0.1	850	83	68	418	2.77	81	0.101	4.1	103	91
FA	944	6.26	1,202	0.010	0.1	16,720	441	69	725	4.81	161	0.094	2.2	334	174
								70	39	0.26	32	0.005	0.4	106	28
31	38	0.25	66	0.015	0.1	615	23	71	85	0.57	36	0.005	0.7	132	28
32	24	0.16	47	0.008	0.1	296	20	72	150	0.99	55	0.008	1.5	102	55
33	327	2.17	198	0.084	0.7	455	109	73	323	2.14	95	0.007	1.4	232	91
34	39	0.26	93	0.007	0.2	258	20	FO	5,297	35.14	1,859	0.032	1.6	3,230	1,621
35	32	0.21	95	0.012	0.3	94	24								
36	252	1.67	244	0.049	0.4	595	102	74	0	0.00	8	0.000	0.0	4	0
37	859	5.70	512	0.076	0.8	1,020	362	75	0	0.00	0	0.000	0.0	8	0
38	244	1.62	196	0.038	1.0	256	83	76	0	0.00	0	0.000	0.0	16	0
39	582	3.86	336	0.077	1.2	479	207	NS	0	0.00	8	0.000	0.0	28	0
40	102	0.67	113	0.019	0.3	400	55								
>>>>>>>>>>>>>>>>>>>>			T O T A L				>>>>>>>>>>>>>>>>>>>>		15,074	100.00	8,385	0.002	0.4	40,145	5,389

* Hunter Days are based on all Upland Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

Table 102. Ruffed Grouse Hunting Data for Saskatchewan by Ecological Divisions, 1985*

	Grassland Zones 1-14		Farmland Zones 15-30		Parkland Zones 31-47		Forest Fringe Zones 48-55		Forest Zones 56-73		Province* Zones 1-73	
	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985	1984	1985
Ruffed Grouse Harvest	449	386	1,612	944	5,441	4,410	1,986	4,037	3,486	5,297	12,974	15,074
(% of Total)	(3.5%)	(2.6%)	(12.4%)	(6.3%)	(42%)	(29%)	(15%)	(27%)	(27%)	(35%)	(100%)	(100%)
Harvest Pressure (kill/sq km)	.007	.006	.018	.010	.055	.045	.076	.154	.021	.032	.029	.034
All Upland Bird Hunter Days	12,717	10,666	18,010	16,720	10,066	7,201	1,426	2,302	2,509	3,230	44,728	40,117
(% of Total)	(28%)	(26.6%)	(40%)	(41.6%)	(22%)	(17.9%)	(3%)	(5.7%)	(6%)	(8.0%)	(99.9%)	(99.9%)
Species Hunter Days	143	180	627	441	2,057	1,828	659	1,320	1,137	1,621	4,624	5,389
(% of Total)	(3%)	(3%)	(13%)	(8%)	(44%)	(34%)	(14%)	(24%)	(25%)	(30%)	(100%)	(100%)
Hunter Pressure (hunter days/sq km)	.196	.165	.198	.184	.102	.073	.054	.088	.015	.020	.10	.09
Hunter Success (kill/hunter day)	.035	.036	.09	.06	0.54	0.61	1.39	1.75	1.39	1.64	0.29	0.38

* Northern Shield Division Zones 74-76 excluded because of insignificance to ruffed grouse hunting (No harvest).

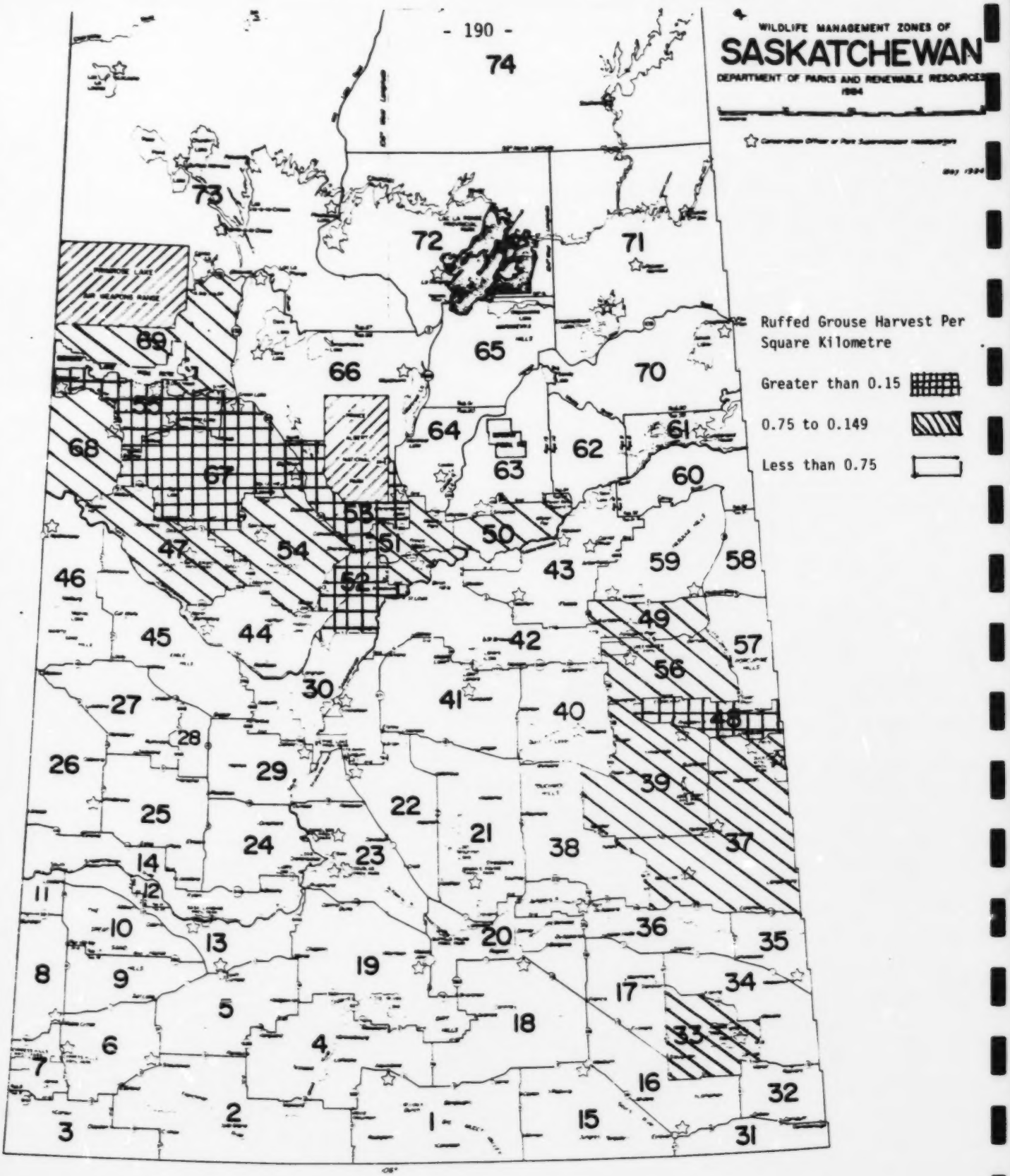


Figure 28. Saskatchewan Ruffed Grouse Harvest Density 1985

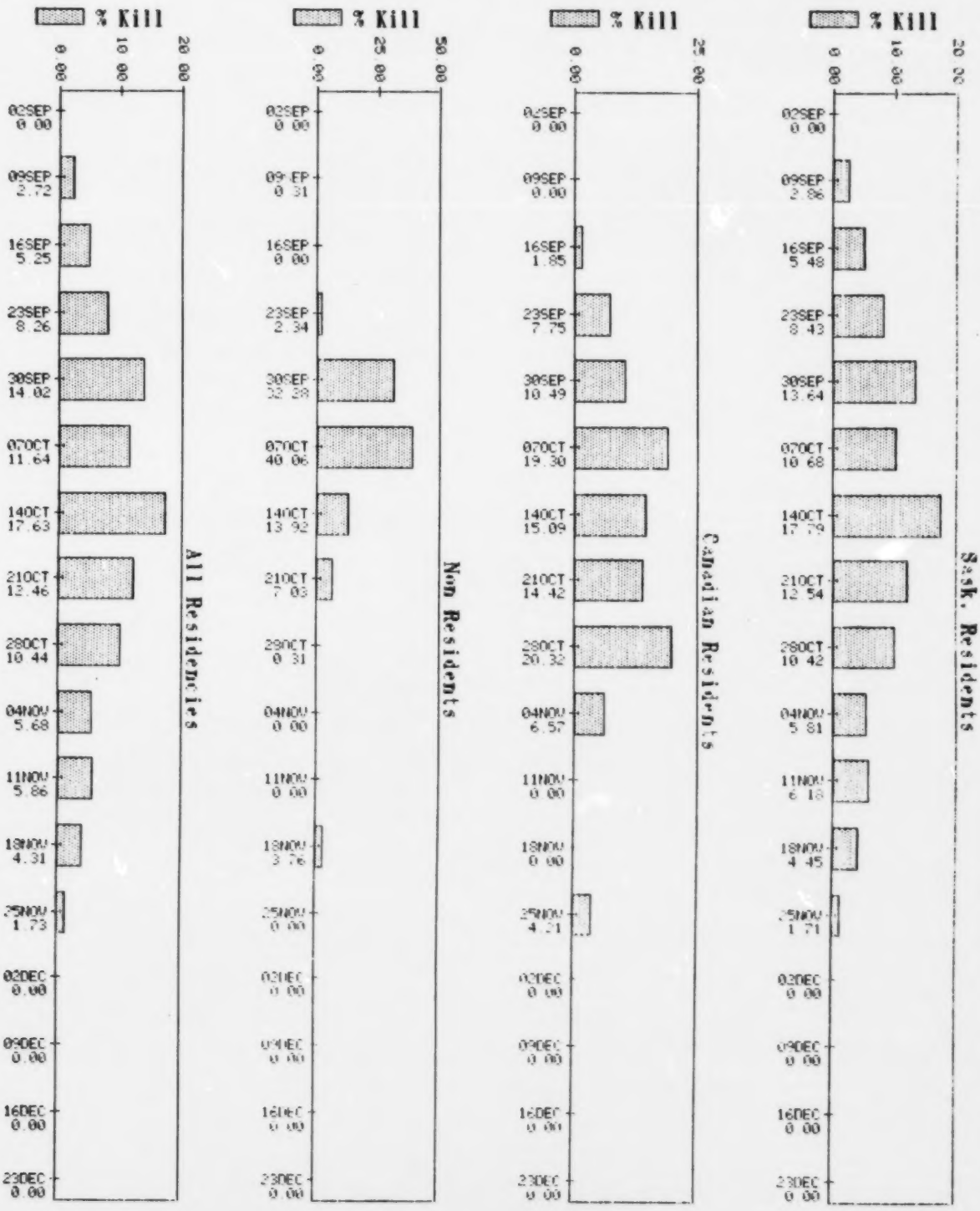


Figure 29. Ruffed grouse harvest by weekly period 1985

Table 103. Most Important Ruffed Grouse Harvest Areas in Saskatchewan, 1984 vs 1985

	1984			1985		
Rank *	Wildlife Mgmt. Zone	Ruffed Grouse Harvest/ Sq km Total Area	% of Provincial Harvest	Wildlife Mgmt. Zone	Ruffed Grouse Harvest/ Sq km Total Area	% of Provincial Harvest
1st	33	.154	4.6	55	.235	5.85
2nd	53	.153	3.3	48	.205	3.45
3rd	48	.150	2.9	53	.182	3.35
4th	39	.110	6.5	67	.166	9.57
5th	55	.096	2.8	52	.154	2.97
Total	Leading 5 Zones	.126	20.0%	Leading 5 Zones	.184	25.19%

* Ranked according to harvest density based on total area in km^2; native habitat areas not yet available for new Wildlife Management Zones.

Table 104. Ruffed Grouse Reproduction in Saskatchewan, 1981-1985
(Based on wing samples from 1985 harvest)

Wildlife Management Division	Juveniles/Adult in Harvest 1981	1982	1983	1984	1979-83 Average	1985	% Change 1985 from 1984	1985 from Average (1979-1983)
Farmland	1.2	1.2	1.14*	1.90*	1.35	1.11*	- 42%	- 18%
Parkland	3.1	2.4	2.29	1.75	2.30	3.62	+ 107%	+ 57%
Forest Fringe				3.16*	N/A	3.23	+ 2%	N/A
Forest	2.8	3.8	4.80	1.93	3.20	3.77	+ 95%	+ 18%
PROVINCE	2.3	1.9	2.51	1.97	2.10	3.45	+ 75%	+ 64%

* Sample of less than 50 wings.

Table 105. Saskatchewan Ruffed Grouse Breeding Population Surveys, Spring 1986

Wildlife Management Zone	Survey Area	Survey Stops	Drums Heard/Survey Stop	
			Average Number	% Change from 1985
21	Bulyea	18	1.20	+91
FARMLAND	(1 survey area)	18	1.20	+91%*
36	Ellisboro	20	0.30	-14
37	Duck Mountain	20	1.85	New Route
37	Parkerview	20	0.25	+400
38	Bryce Lake	15	0.73	New Route
39	Margo	18	1.11	-31
42	Barrier	20	1.45	-26
45	Lizzard Lake	20	0.20	No Drums in '85
45	Battle River-Freemont	23	0.48	-70
47	Sandwith	15	0.87	+234
PARKLAND	(9 survey areas)	171	0.80	-31%*
48	Rockford	21	1.29	New Survey
50	Fort a la Corne	17	1.47	+40
53	Tote Road	20	3.55	+39
55	St. Cyr Lake	30	0.87	+5
FOREST FRINGE	(4 survey areas)	88	1.69	+42%*
56	McBride Lake	15	1.00	-28
56	Greenwater	15	0.87	No change
57	Woody Lake Road South	17	1.88	+189
57	Ridge Road	15	1.00	+200
59	Fir River Road	20	1.10	+29
60	Squaw Rapids	18	0.72	-24
64	Snowfield Pulp Road	20	1.55	-60
67	Boundary Road	20	0.55	No change
69	Mistohay	20	2.80	+250
FOREST	(9 survey areas)	160	1.29	+10%*
PROVINCE	(23 survey areas)	437	1.17	+6%*

* Based on survey areas surveyed in both 1984 and 1985.

The Parkland (Zones 31-47) has not exhibited any increase in 1986 but the Fort a la Corne route (now classed as Forest Fringe) is up 40% to 1.47 drums per stop from 1.05 drums per stop in 1985. The Forest Fringe index is presently the best at about 1.7 drums per survey stop although few routes in the Parkland and Forest are above the Forest Fringe average.

Figure 30 exhibits how hunter harvest tracks the classical increase and crash of the ruffed grouse population over the last 13 years and substantiates the legendary 10-11 year cycle in ruffed grouse numbers. Populations have started to show signs of building this year. Hunters should see improvement in numbers of ruffed grouse for the fall of 1986 especially in the northwest. Since populations are only in the initial building stages, similar seasons and bag limits are in place for 1986.

Summary

No significant season changes are proposed for 1985. Populations are in a state of recovery from an 11-year low. In the Grasslands, Farmlands and Parklands the season opening coincides with the Hungarian partridge opening date. In keeping with ruffed grouse seasons overlapping the big game seasons in the Forest and Shield, hunting season dates of September 8 - November 29 are proposed. Only the initial 2 weeks of the bear season, the first week of the early moose season in Zones 70-76, and the late Cookson elk season are not encompassed by these dates.

The 1985 ruffed grouse harvest increased 16% after bottoming out in 1984. 1986 spring surveys show improvement in the populations in the Forest and Forest Fringe zones. The Parkland populations are exhibiting a lag in synchrony with the cycle in Forest populations. No changes are proposed in bag limits. Proposed season dates are similar to 1985.

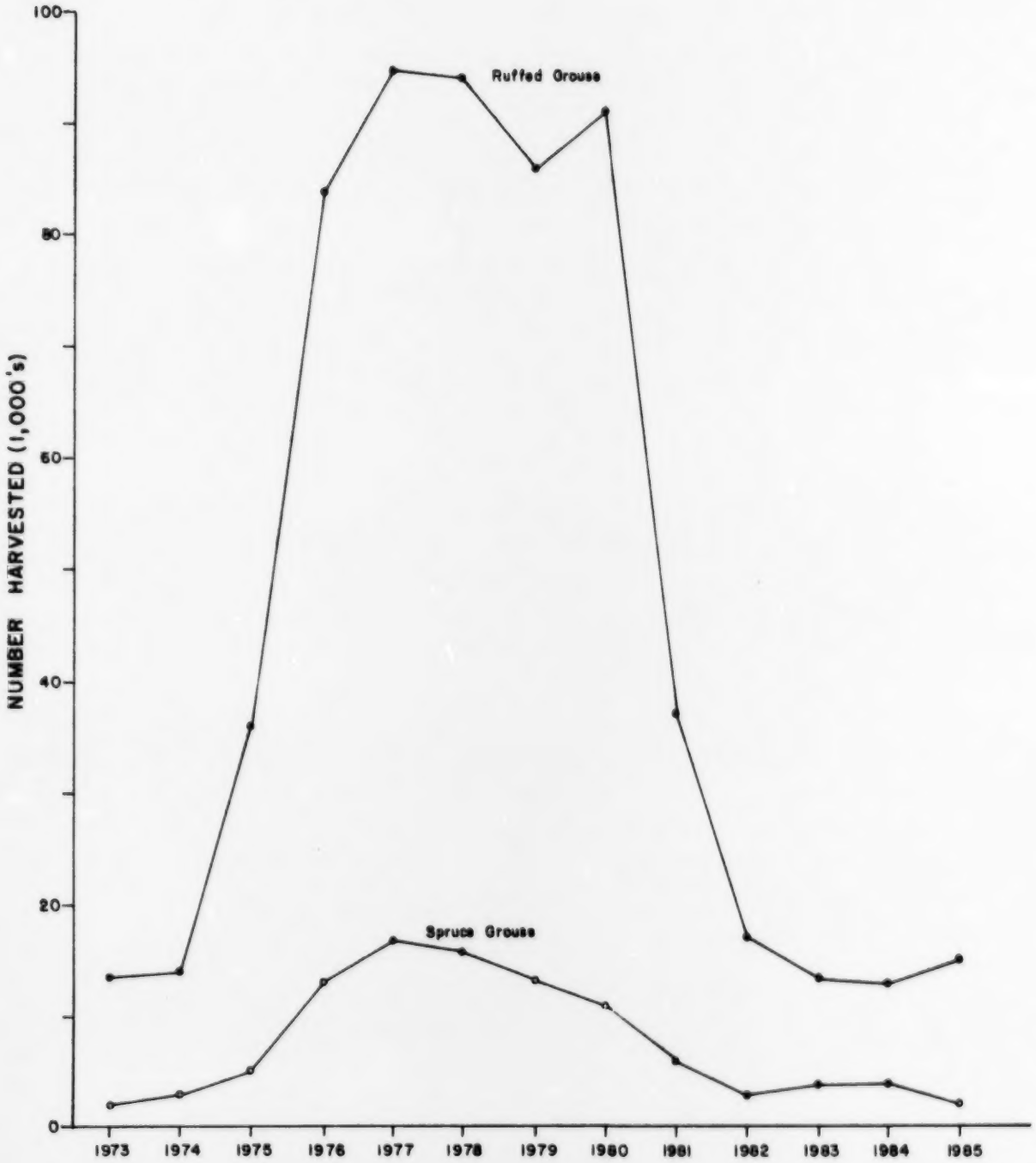


Figure 30. Saskatchewan Ruffed and Spruce Grouse harvest, 1973-1985

1986 Ruffed Grouse Hunting Regulations

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 1-47, including Last Mountain Lake and Elbow Wildlife Management Units; and Moose Mountain and Duck Mountain Provincial Parks	Sept. 22 - Nov. 15	5 daily 10 possession
Zones 48-76, including Fort a la Corne Wildlife Management Unit; Clear-water River, Greenwater, Meadow Lake, Nipawin and Lac la Ronge Provincial Parks; and Bronson Forest Recreation Site	Sept. 8 - Nov. 29	5 daily 10 possession

SPRUCE GROUSE

The 1985 spruce grouse harvest of 4,230 birds was equivalent to 1984 levels (4,352). 1,034 of 1,362 active hunters were successful and 1,305 recreation days were provided. Zones 63 and 73 accounted for 28% of the harvest. Spring surveys and wing collections are not conducted for spruce grouse.

Table 106 outlines spruce grouse hunting activity and harvest in 1985 while Figure 32 outlines the chronology of the harvest by weekly intervals. Harvest density is outlined in Figure 31.

1986 Spruce Grouse Hunting Regulations

To reduce confusion, the season opening date for Zone 43, the only Parkland Zone open for spruce grouse hunting, coincides with the ruffed grouse season in that zone. The sharp-tailed grouse and Hungarian partridge seasons are also slated to open September 22 in Zone 43. Bag limits will remain the same as 1985 at 5 birds per day.

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zone 43	Sept. 22 - Nov. 15	5 daily 10 possession
Zones 48-76, including Fort a la Corne Wildlife Management Unit; Clear-water River, Meadow Lake, Nipawin and Lac la Ronge Provincial Parks; and Bronson Forest Recreation Site	Sept. 8 - Nov. 29	5 daily 10 possession

Table 106 . Saskatchewan Spruce Grouse Harvest and Hunting Pressure by Wildlife Management Zone 1985

WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days	WMZ	Total Kill	% of Harvest	Active Hunters per WMZ	Kill per sq.Km.	Kill per Day	Total Hunter Days	Species Hunter Days
1	0	0.00	0	0.000	0.0	1,000	0	41	0	0.00	0	0.000	0.0	178	0
2	0	0.00	0	0.000	0.0	1,205	0	42	0	0.00	0	0.000	0.0	494	0
3	0	0.00	0	0.000	0.0	58	0	43	32	0.75	39	0.005	0.2	145	8
4	0	0.00	0	0.000	0.0	2,364	0	44	0	0.00	0	0.000	0.0	487	0
5	0	0.00	0	0.000	0.0	1,910	0	45	0	0.00	0	0.000	0.0	887	0
6	0	0.00	0	0.000	0.0	214	0	46	0	0.00	0	0.000	0.0	169	0
7	0	0.00	0	0.000	0.0	123	0	47	0	0.00	0	0.000	0.0	372	0
8	0	0.00	0	0.000	0.0	267	0	PA	32	0.75	39	0.000	0.0	7,201	8
9	0	0.00	0	0.000	0.0	805	0								
10	0	0.00	0	0.000	0.0	822	0	48	16	0.37	24	0.006	0.1	189	4
11	0	0.00	0	0.000	0.0	251	0	49	39	0.93	24	0.016	0.2	181	28
12	0	0.00	0	0.000	0.0	138	0	50	95	2.24	95	0.028	0.4	248	59
13	0	0.00	0	0.000	0.0	836	0	51	102	2.42	87	0.036	0.5	199	35
14	0	0.00	0	0.000	0.0	673	0	52	110	2.61	32	0.038	0.4	319	35
GR	0	0.00	0	0.000	0.0	10,666	0	53	79	1.86	79	0.028	0.3	256	28
								54	55	1.30	39	0.010	0.1	433	8
15	0	0.00	0	0.000	0.0	2,971	0	55	126	2.98	77	0.034	0.3	477	35
16	0	0.00	0	0.000	0.0	630	0	FF	623	14.72	456	0.024	0.3	2,302	232
17	0	0.00	0	0.000	0.0	629	0								
18	0	0.00	0	0.000	0.0	786	0	56	87	2.05	39	0.018	0.3	315	43
19	0	0.00	0	0.000	0.0	3,623	0	57	142	3.35	79	0.043	1.0	150	43
20	0	0.00	0	0.000	0.0	863	0	58	0	0.00	0	0.000	0.0	63	0
21	0	0.00	0	0.000	0.0	2,048	0	59	55	1.30	24	0.009	0.8	86	32
22	0	0.00	0	0.000	0.0	408	0	60	39	0.93	8	0.010	1.7	24	8
23	0	0.00	0	0.000	0.0	1000	0	61	0	0.00	0	0.000	0.0	18	0
24	0	0.00	0	0.000	0.0	673	0	62	47	1.12	44	0.013	1.2	40	16
25	0	0.00	0	0.000	0.0	330	0	63	733	17.34	170	0.130	1.6	467	259
26	0	0.00	0	0.000	0.0	299	0	64	95	2.24	87	0.027	0.7	138	51
27	0	0.00	0	0.000	0.0	245	0	65	307	7.27	95	0.047	2.6	118	67
28	0	0.00	0	0.000	0.0	187	0	66	39	0.93	47	0.003	0.4	91	28
29	0	0.00	0	0.000	0.0	978	0	67	276	6.52	110	0.032	0.4	709	75
30	0	0.00	0	0.000	0.0	850	0	68	8	0.19	24	0.002	0.1	103	4
FA	0	0.00	0	0.000	0.0	16,720	0	69	407	9.62	137	0.052	1.2	334	113
								70	284	6.71	39	0.033	2.7	106	67
31	0	0.00	0	0.000	0.0	615	0	71	323	7.64	47	0.018	2.5	132	71
32	0	0.00	0	0.000	0.0	296	0	72	142	3.35	55	0.008	1.4	102	47
33	0	0.00	0	0.000	0.0	455	0	73	457	10.81	95	0.010	2.0	232	110
34	0	0.00	0	0.000	0.0	258	0	FO	3,441	81.37	1,100	0.021	1.1	3,230	1,033
35	0	0.00	0	0.000	0.0	94	0								
36	0	0.00	0	0.000	0.0	595	0	74	8	0.19	16	0.000	2.0	4	4
37	0	0.00	0	0.000	0.0	1,020	0	75	32	0.75	16	0.001	4.0	8	8
38	0	0.00	0	0.000	0.0	256	0	76	95	2.24	16	0.001	6.0	16	16
39	0	0.00	0	0.000	0.0	479	0	NS	134	3.17	47	0.001	4.9	28	28
40	0	0.00	0	0.000	0.0	400	0								
>>>>>>>>>>>>>>>>>>>>	T O T A L	>>>>>>>>>>>>>>>>>>>>							4,229	100.00	1,643	0.000	0.1	40,145	1,301

* Hunter Days are based on all Upland Hunting.
* The Total Active Hunter value is NOT the true Provincial Total.

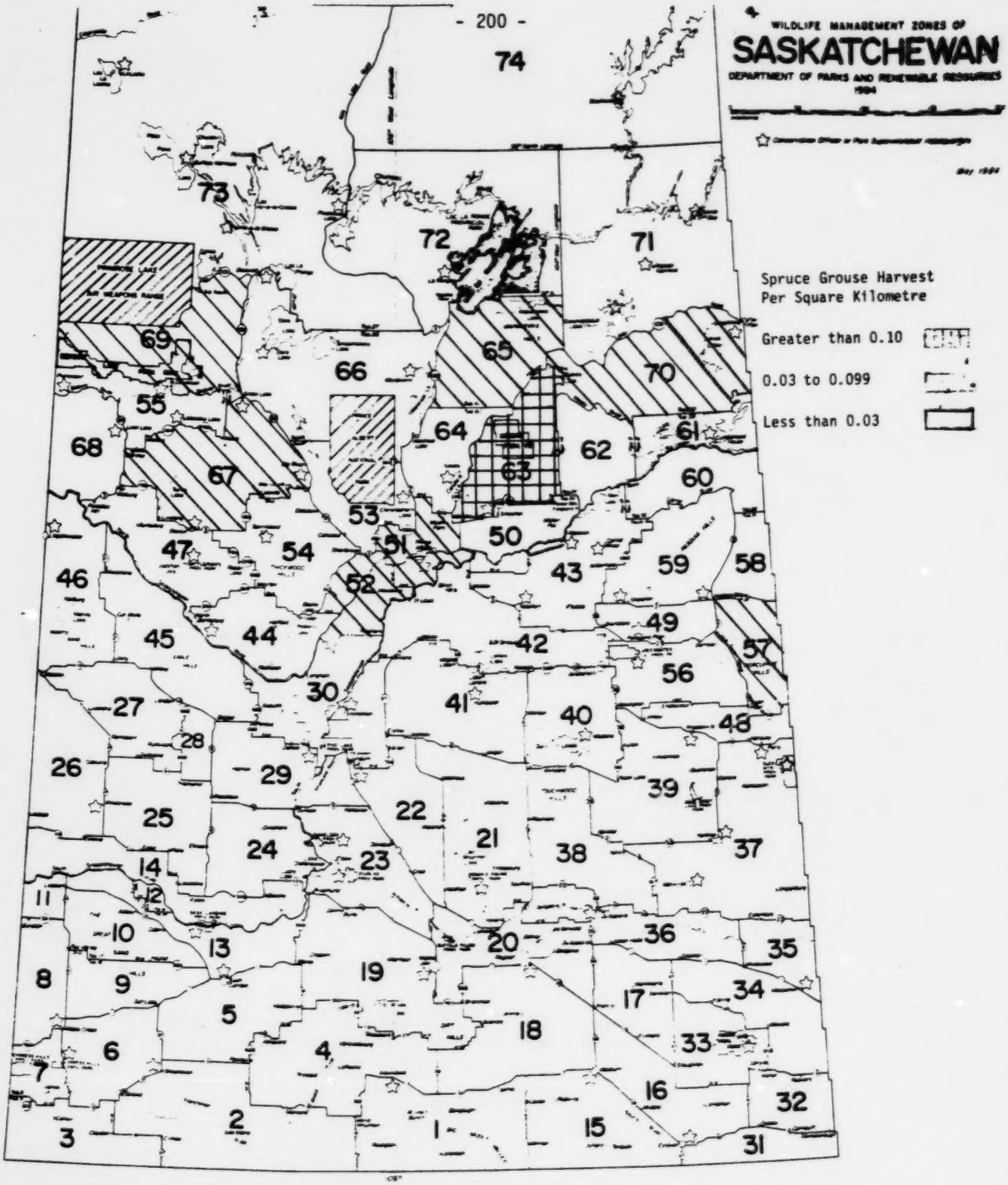


Figure 31. Saskatchewan Spruce Grouse Harvest Density 1985

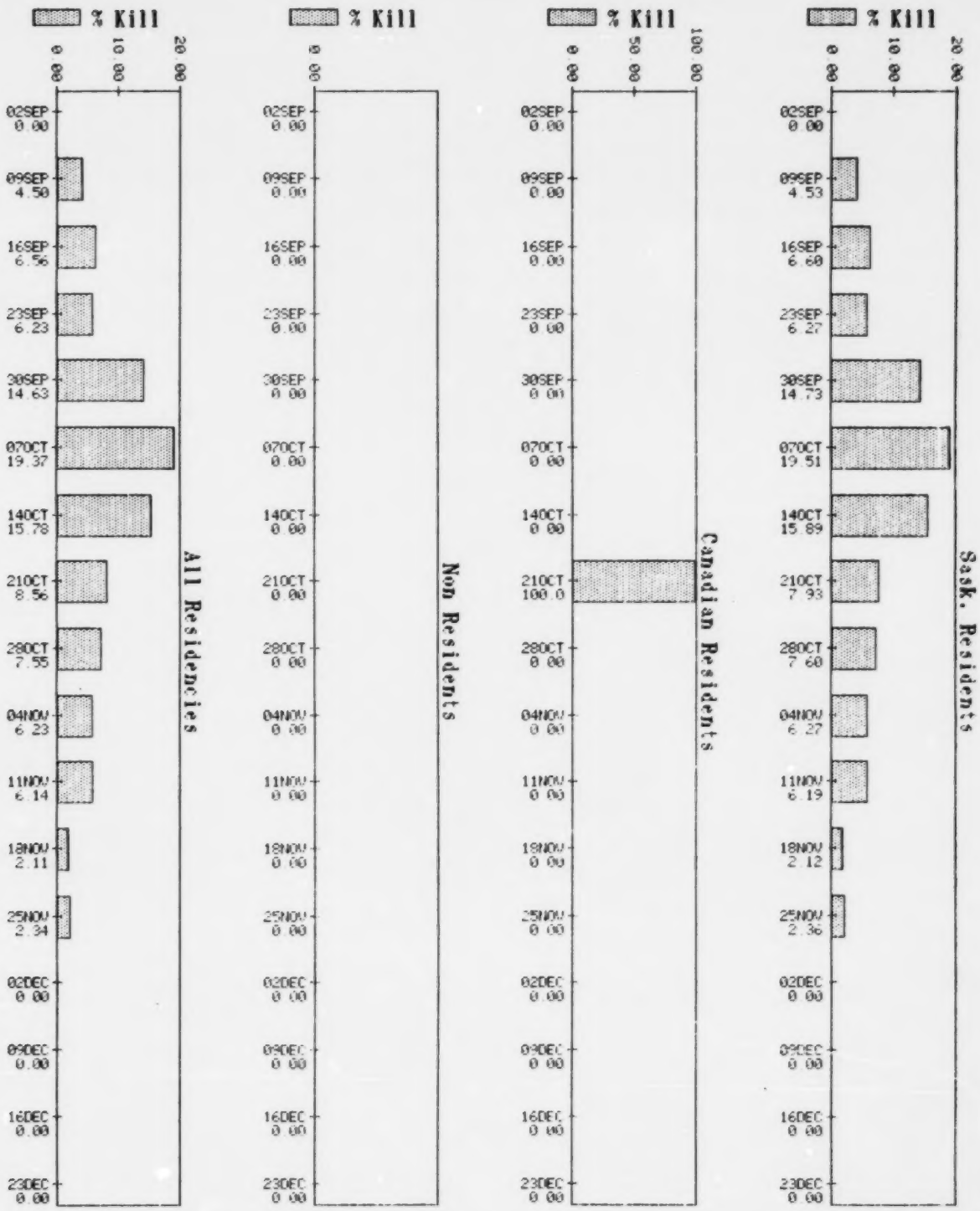


Figure 32. Saskatchewan 1985 spruce grouse harvest by weekly intervals

PTARMIGAN

Little new information is available on recent ptarmigan distribution, numbers or utilization by sport hunters. Migrations are known to occur into the Deschambault Lake area and into the White Lake area off the Reindeer River. Most of the ptarmigan range is relatively inaccessible and utilization is opportunistic by big game hunters and trappers.

Some northern residents have expressed the desire for a later closing date because ptarmigan are rarely observed until after late December.

A recommendation has also been received to extend the ptarmigan season so that it coincides with the Barren Ground Caribou season.

1986 Ptarmigan Hunting Regulations

WMZ Open	Season Dates (Inclusive)	Bag Limit
Zones 61-66, 69-76, including Clearwater River and Lac la Ronge Provincial Park	Nov. 17/86- Mar. 14/87	10 daily 20 possession

Appendix 1. 1985 Big Game Hunting Season Regulations.

Big Game

1985 Special Big Game Seasons

Saskatchewan Residents Only by Application and Draw

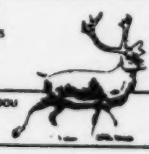
Species	Wildlife Management Zones Open	Season Dates (Inclusive)	Limit	General Information
Antelope (tentative)	Zones 1 to 14, 19 and 23 to 26	Oct. 28 - Nov. 2	one antelope, either sex	- Antelope licence quotas will be set after July aerial surveys
Antelope (Archery tentative)	Zones 1 to 14, 19 and 23 to 26	Sept. 2 - Oct. 5	one antelope, either sex	- Antelope archery licences are valid in any open zones during the archery season only
Special Elk	Zones 6 and that portion of Zone 7 east of Highway No. 271 and Grid Road No. 615	Oct. 21 - Oct. 28	one elk, either sex	- Licence quotas (in brackets) for each zone: 6 and the east portion of 7 combined (100), the west portion of zone 7(100, 33(100, 50(275), 48, 49, 56 and 57 combined (500)
	That portion of Zone 7 west of Highway No. 271 and Grid Road No. 615, including Cypress Hills Provincial Park (West Block).	Oct. 21 - Oct. 28	one elk, either sex	
	Zone 33, including Moose Mountain Provincial Park	Oct. 28 - Nov. 2	one elk, either sex	
	That portion of Zone 50 south of Highway No. 55 including Fort a la Corne Wildlife Management Unit	Sept. 2 - Sept. 21 & Nov. 4 - Nov. 16	one elk, either sex	
	Zones 48, 49, 56 and 57 combined, including Greenwater Provincial Park	Oct. 21 - Oct. 28	one elk, either sex	
Special Moose	Zones 48, 49 and 56 combined, 57 to 62 and 67, including Leaf Lake Wildlife Management Unit	Sept. 16 - Sept. 21 & Nov. 4 - Nov. 16	one moose, either sex	- Licence quotas (in brackets) for each zone: 37(100), 50(100), 48, 49 and 56 combined (300), 57(200), 58(200), 59(400), 60(200), 61(100), 62(50), 67(200), 55 and 68 combined (200), Greenwater Provincial Park (50)
	Zones 55 and 68 combined, including Bronson Forest Recreation Site	Nov. 4 - Nov. 16	one moose, either sex	
	Zone 37, including Duck Mountain Provincial Park	Nov. 4 - Nov. 9	one moose, either sex	
	Greenwater Provincial Park Only	Nov. 4 - Nov. 9	one moose, either sex	
	Zone 50 including Fort a la Corne Wildlife Management Unit	Sept. 16 - Sept. 28 & Nov. 4 - Nov. 16	one moose, either sex	
Moose (Archery)	Zones 55 and 68 combined, including Bronson Forest Recreation Site	Sept. 16 - Sept. 28	one moose, either sex	- Archery moose licences valid only during the archery season, Sept. 16 to Sept. 28; quota (100)
Mule Deer	Zones 1, 3 to 8, 19, 23 to 27, 29, 30 and 45, including Elbow Wildlife Management Unit and Cypress Hills Provincial Park (West Block)	Nov. 4 - Nov. 9	one mule deer either sex	
	Zone 46	Nov. 11 - Nov. 16	one mule deer, either sex	- Licence quotas (in brackets) for each zone: 1(100), 2(1000), 3(300), 4(75), 5(300), 6(400), 7(300), 8(50), 9(500), 10(800), 12(150), 13(400), 14(600), 19(200), 23(200), 24(200), 25(150), 26(200), 27(150), 29(100), 30(100), 45(50), 46(100)
	Zones 2, 9, 10, 12, 13 and 14, including Saskatchewan Landing Provincial Park Note: Muzzleloading firearms only in Saskatchewan Landing Provincial Park	Oct. 31 - Nov. 2 or Nov. 4 - Nov. 6	one mule deer, either sex	
Antlerless Mule Deer	Zones 2, 9 and 11 to 14, including Saskatchewan Landing Provincial Park Note: Muzzleloading firearms only in Saskatchewan Landing Provincial Park	Nov. 8 and 9 or Nov. 11 and 12	two antlerless mule deer	- "Antlerless Mule Deer" means a doe or a 1985 fawn - Licence quotas (in brackets) for each zone: 1(75), 2(1500), 3(100), 5(300), 6(500), 7(200), 8(50), 9(500), 10(3000), 11(450), 12(500), 13(800), 14(1200)
	Zone 10	Nov. 8 and 9, Nov. 11 and 12, or Nov. 14 to 16	two antlerless mule deer	
	Zones 1, 3 and 5 to 8	Nov. 11 and 12	one antlerless mule deer	
Mule Deer (Archery)	Zones 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 2 - Oct. 5	one mule deer, either sex	- Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (800), 9 and 10 combined (150), 12(50) Note: The opening date in Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks is delayed to September 4
	Zones 9, 10 and 12	Sept. 9 - Sept 21	one mule deer, either sex	- Archery licences valid only in archery season
Antlerless Mule Deer (Archery)	Zones 1 to 8, 11, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 2 - Oct. 5	two antlerless mule deer	- Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (100), 9 and 10 (150), 12 (50) Note: The opening date in Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks is delayed to Sept 4
	Zones 9, 10 and 12	Sept. 9 - Sept. 21	two antlerless mule deer	

Big Game

1993 Big Game Seasons

Species	Wildlife Management Zones Open	Season Dates (Inclusive)	Limit	General Information
White-tailed Deer (Primitive Weapons, Sask. Residents Only)	Zones 1 to 8, 11 to 37, 39 to 76, including Elbow, Great Bend, Horseshoe Lake and Fort a la Corne Wildlife Management Units, Duck Mountain, Greenwater, Lac La Ronge, Meadow Lake and Nipawin Provincial Parks and Bronson Forest Recreation Site	Archery Sept. 2 - Oct. 12 Muzzleloading Rifles Sept. 30 - Oct. 12	one white-tailed deer, either sex	- An unsuccessful archer may purchase a first regular licence to hunt white-tailed deer by turning in his unused archery licence at any department office - White-tailed deer archery licences are valid in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30 during the Nov. 18 to Nov. 30 season
	Zones 9 and 10	Archery Sept. 9 - Oct. 12 Muzzleloading Rifles Sept. 30 - Oct. 12	one white-tailed deer, either sex	
	Zone 38	Archery Sept. 2 - Oct. 12 Muzzleloading Rifles Sept. 30 - Oct. 12	one antlered white-tailed deer	- "Antlered White-tailed Deer" means any deer with an antler or antlers at least 10 centimetres-in-length as measured along the outside curve from the skull to the tip - Muzzleloading rifle white-tailed deer licences are valid only in Muzzleloading season Sept. 30 to Oct. 12 except in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30
White-tailed Deer (Sask. Residents, Canadian Residents and Non-residents)	Zones 56 to 61, 67 and 68, including Leaf Lake Wildlife Management Unit, Greenwater and Meadow Lake Provincial Parks	Oct. 7 - Oct. 19 & Nov. 11 - Nov. 30	one white-tailed deer, either sex	
	Zone 68, including Bronson Forest Recreation Site	Nov. 11 - Nov. 30	one white-tailed deer, either sex	
	Zones 62 to 66, including Nipawin Provincial Park	Nov. 18 - Nov. 30	one white-tailed deer, either sex	
	Zones 70 to 76, including Lac La Ronge Provincial Park	Nov. 4 - Nov. 30	one white-tailed deer, either sex	
White-tailed Deer (Sask. Residents and Canadian Residents)	Zones 1 to 14, and 24 to 26	Sask. Residents Nov. 18 - Nov. 27 Canadian Residents Nov. 25 - Nov. 27	one white-tailed deer, either sex	- Holders of unused primitive weapons licences may hunt white-tailed deer in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30 during the regular season
	Zones 15 to 23, 27 to 36 and 39 to 55, including Brokenshell No. 1 and No. 2, Cookson, Estevan-Cambria, Lomond No. 3 (at Maxim), Elbow, Fort a la Corne, Horseshoe Lake and Last Mountain Lake Wildlife Management Units; and Moose Mountain Provincial Park	Sask. Residents Nov. 18 - Nov. 30 Canadian Residents Nov. 25 - Nov. 30	one white-tailed deer, either sex	- **Please refer to enclosed map for the portion of Management Zones 20 and 30 restricted to shotgun, archery, and muzzleloading rifle hunting only** - Hunters will be restricted to designated trails within the Cookson Wildlife Management Unit
	Zone 38	Sask. Residents Nov. 18 - Nov. 30 Canadian Residents Nov. 25 - Nov. 30	one antlered white-tailed deer	
	Zone 37, including Duck Mountain Provincial Park	Sask. Residents Nov. 18 - Nov. 23	one antlered white-tailed deer	- "Antlered White-tailed Deer" means any deer with an antler or antlers at least 10 centimetres-in-length as measured along the outside curve from the skull to the tip
	Zone 37, including Duck Mountain Provincial Park	Sask. Residents Nov. 25 - Nov 30 Canadian Residents Nov. 25 - Nov. 30	one white-tailed deer, either sex	- **"Roads and Trails Only". Hunters in Zones 15 to 17, 20 and 30 to 34 must keep vehicles on roads and road allowances with trails**
	Zones 31 and 32	Sask. Residents Dec. 2 - Dec. 7	one antlerless white-tailed deer	- "Antlerless white-tailed deer" means a doe or a 1995 fawn
Antlerless White-tailed Deer (Sask. Residents Only)	Zones 31 and 32	Dec. 2 - Dec. 7	one antlerless white-tailed deer	- Hunters may purchase an antlerless white-tailed deer licence in addition to their regular white-tailed deer licence - Antlerless white-tailed deer licences are valid only in Zones 31 and 32 during the Dec. 2 to Dec. 7 season - "Antlerless white-tailed deer" means a doe or a 1995 fawn
White-tailed Deer with Guided Moose	Zones 60, 61 and 62	Persons holding valid deer licences and possessing guided moose licences, Sept. 30 - Oct. 19 and Nov. 4 - Nov. 9	one white-tailed deer, either sex	

Big Game

	Zone 69	Persons holding valid deer licences and possessing guided moose licences Sept. 9 - Sept. 21 Sept. 30 - Oct. 5 & Nov. 4 - Nov. 9	one white-tailed deer, either sex	- Services of a registered guide must be used.
	Zones 70 to 76, including Lac La Ronge Provincial Park	Persons holding valid deer licences and possessing guided moose licences Sept. 9 - Sept. 21 & Sept. 30 - Oct. 12	one white-tailed deer, either sex	
Regular Elk (Sask. Residents Only)	Zones 48, 49, 50 (North of Highway 55), 56 to 64, 66 and 69, including Nipawin Provincial Park, and the northeast portion of Meadow Lake Provincial Park north of 17th base line.	Sept. 16 - Sept. 28 & Dec. 2 to Dec. 7	one antlered elk	- "Antlered Elk" means any elk having an antler or antlers at least 15 centimetres in length as measured on the outside curve of the antler from the skull to the tip - **Watch for signs in Meadow Lake Provincial Park**
	Zone 53, including Cookson Wildlife Management Unit	Nov. 4 - Dec. 14	one elk, either sex	- **Note:** Hunters will be restricted to designated trails within the Cookson Wildlife Management Unit
Regular Moose (Sask. Residents Only)	Zones 43, 48, 49, 53, 56 to 67 and 69, including Leaf Lake Wildlife Management Units and Nipawin Provincial Park	Oct. 7 - Oct. 12	one bull or one 1985 calf moose	- "Bull Moose" means a male moose one or more years old. "Calf Moose" means any moose born in 1985. "Cow Moose" means a female moose one or more years old
Early Season	Zones 70 to 76, including Lac La Ronge Provincial Park	Sept. 2 - Sept. 21	one bull or one 1985 calf moose	- Successful applicants for a special moose licence are not eligible to purchase a regular moose licence
	Zones 43, 48, 49 and 56 to 59, including Leaf Lake Wildlife Management Unit	Nov. 18 - Nov. 30	one bull or one 1985 calf moose	- The antlers of bull moose and the lower jaw of calf moose must accompany the carcass
Late Season	Zones 53, 55 and 60 to 69, including Cookson Wildlife Management Unit, Nipawin Provincial Park and Bronson Forest Recreation Site	Nov. 18 - Nov. 23	one bull or one 1985 calf moose	
	Zones 70 to 76, including Lac La Ronge Provincial Park	Nov. 4 - Nov. 30	one bull or one 1985 calf moose	
Guided Moose (Canadian Residents and Non-residents)	Zones 60, 61 and 62	Sept. 30 - Oct. 19 & Nov. 4 - Nov. 23	one bull or one 1985 calf moose	- The antlers of bull moose and the lower jaw of calf moose must accompany the carcass
	Zone 69	Sept. 9 - Sept. 21 Sept. 30 - Oct. 5 & Nov. 4 - Nov. 23	one bull or one 1985 calf moose	- Services of a registered guide must be used
	Zones 70 to 76, including Lac La Ronge Provincial Park	Sept. 9 - Sept. 21 Sept. 30 - Oct. 12 & Nov. 4 - Nov. 30	one bull or one 1985 calf moose	- 400 Guided Moose Licences are available. Quotas (in brackets) for each zone: 60(60), 61(115), 62(15), 69(15), 70(10), 71(45), 72(45), 73(10), 74(45), 75(10), 76(30)
Woodland Caribou (Sask. Residents, Canadian Residents and Non-residents) 	Zones 58, 59, 61 to 66 and 69, including Nipawin Provincial Park	Nov. 18 - Nov. 30	one woodland caribou, either sex	- Canadian residents and Non-residents must use the services of a registered guide when hunting caribou
	Zones 70 to 75, including Lac La Ronge Provincial Park	Sept. 9 - Sept. 21 Sept. 30 - Oct. 12 & Nov. 4 - Dec. 7	one woodland caribou, either sex	
Barren-ground Caribou (Sask. Residents of Zone 76 only)	Zone 76	Nov. 1 - Mar. 1 1986	two barren-ground caribou, either sex, separate licences required	- Residents of Zone 76 means Saskatchewan residents living in Zone 76 during the past three months
Bear (Sask. Residents, Canadian Residents and Non-residents)	Zones 42, 43 and 48 to 76, including Cookson, Horseridge Lake and Leaf Lake Wildlife Management Units.	Aug. 26 - Oct. 19	two bear, either sex, separate licences required	- Unused spring bear licences are valid in fall seasons
	Lac La Ronge, Meadow Lake, Nipawin and Duck Mountain Provincial Parks and Bronson Forest Recreation Site	Sept. 4 - Oct. 19	two bear, either sex, separate licences required	
	Fort a la Corne Wildlife Management Unit only	Sept. 23 - Oct. 19	two bear, either sex, separate licences required	
	Note: A person hunting in zones 58 to 61 during an August, September or October big game season may obtain two free bear seals. One bear, either sex, can be taken per seal while hunting under a valid big game licence. Once the big game licence has been filled, the free bear seals are no longer valid for hunting.			- Zones 58 to 61 free bear seals are available at department offices only

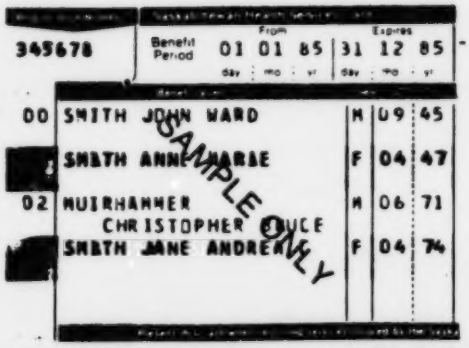
Saskatchewan Parks and Renewable Resources
HON. COLIN MAXWELL
MINISTER

1985 Saskatchewan Big Game Draw Information Sheet

(Residents of Saskatchewan Only)

1. Only Saskatchewan residents may apply for Big Game Draw licences. Applications from persons age 15 or younger will not be accepted. Applications will **only** be accepted on 1985 application envelopes.
2. Persons **16 or 17 years of age and all first time hunters** must hold a Firearm or Hunter Safety certificate before applying.
3. **Deadline:** Applications must be received at the S.P.R.R. office, 3211 Albert Street, Regina, no later than 5:00 p.m. C.S.T., **July 7, 1985** to be eligible. Post Office date stamps are not acceptable.
4. No person shall submit an application if their hunting rights are restricted for either a Wildlife Act conviction or a firearm accident as of July 7, 1985.
5. Each applicant **must** list their full registration and beneficiary number from their 1985 Saskatchewan Health Services Card. **Do not use** Health Region, M.S.I., or G.M.S. card numbers. Print your registration number first, followed by **your** individual beneficiary number in this manner 345678-00 (see sample S.H.S. Card). Permanent members of the Armed Forces and R.C.M.P. use regimental number and "X" appropriate box on application.

Each person on this card has a separate beneficiary number. Use your own beneficiary number (adjacent to your name) following your registration number on your application.



6. Complete your application form using your name **exactly** as it apears on your S.H.S. Card. Be sure to **complete both sides** of the application.
7. **Applications will be rejected** for any of the following reasons:
   — no licence fees, incorrect fees or unsigned cheques;
   — containing false or incomplete information;
   — containing special instructions;
   — containing ineligible names;
   — having a person's name appear on more than one application envelope for a particular species.

   NOTE: Supplying false or misleading information is a violation of The Wildlife Act.
8. A person may apply only **once** for each species: Elk, Moose, Mule Deer or Antelope (either archery or regular — **not both**). Please print the species in the appropriate box on the application form. A separate application is required for each species.
9. Each application must be signed by one of the applicants. This person is responsible for the validity of the information provided.
10. Successful applicants for a Special Elk Licence are **not** eligible to purchase a Regular Elk licence. Successful applicants for a Special Moose Licence are not eligible to purchase a Regular Moose Licence.
11. **Licence fee: $30** for each applicant — same fee for all species. Licence fee **must** be included with the application. Send a cheque or money order **(no cash)** payable to Saskatchewan Parks and Renewable Resources. From 1 to 4 persons may apply on one application envelope.
12. **Priority Pools:** The following priority pools apply to all species and seasons:
    "Super A" — applications listing applicants who qualified for "A" Pool **and applied** in 1984 but were not drawn for that species (1st priority) (see inside page for details).
    "A" — applications listing persons who did not have a licence for a particular species in 1983 and 1984 (2nd priority);
    "B" — applications listing persons who obtained a licence (either archery or regular) in 1983 (3rd priority);
    "C" — applications listing persons who had a licence (either archery or regular) in 1984 (4th priority).

    Please Note: Applications will receive the lowest priority of any applicant on the application. For example, if you apply on the same application with a person who was drawn for that species in 1983, your application will go into Pool "B".

13. **Zone Preference:** You may select up to six management zones. List them in order of preference in boxes 1 to 6 by writing in the zone numbers. **CHECK THE MAP ON THE INSIDE PAGE. (PAGE 5)**
14. Applicants will have **no choice** of season dates in zones where split seasons are offered. If you are not willing to hunt during some of the split season dates, apply only for zones where split seasons do not occur.
15. **Antlerless Mule Deer Season:** Those persons wishing to hunt in the antlerless Mule Deer season, if unsuccessful in the regular Mule Deer draw, should place an "X" in the box marked "antlerless", otherwise leave the box blank. Please read the information outlined in the Mule Deer seasons for further details.
16. **Archery Seasons:** Place an "X" in the box marked "archery" if you are applying for the Antelope, Mule Deer or Moose Archery seasons - otherwise leave blank.
    Antlerless Mule Deer licences will be available for archers in 1985. For further details see section 15 (above) and Archery Mule Deer seasons.

    Note: Mule Deer applicants must list their zone preference on the application. Archery licences are valid only during the archery season.
17. Should you require additional information, please contact your nearest Saskatchewan Parks & Renewable Resources office.

SEASON DATES (INCLUSIVE) AND TENTATIVE LICENCE QUOTAS (IN BRACKETS)

Remember: Six zone choices are now available on each application.
Licences in combined zones will be valid in all zones designated.

ELK

SPECIAL ELK SEASON (Either Sex)

Sept. 2 - Sept. 21 & Nov. 4 - Nov. 16	Zone 50, south of Highway No. 55, including Fort a la Corne Wildlife Management Unit (275 licences).
Oct. 21 - Oct. 26	Zones 48, 49, 56 and 57 combined, including Greenwater Provincial Park (500 licences). * Designate Zone 48 for the combined Zones 48, 49, 56 and 57.
Oct. 28 - Nov. 2	Zone 33, including Moose Mountain Provincial Park (100 licences).
Oct. 21 - Oct. 26	Zone 7, west of Highway No. 271 and Grid Road #615 including Cypress Hills Provincial Park, West Block (100 licences).
Oct. 21 - Oct. 26	Zones 6 and that portion of Zone 7 east of Highway No. 271 and Grid Road #615 (100 licences). * Designate Zone 6 for combined Zones 6 and 7.

MOOSE

SPECIAL MOOSE SEASON (Either Sex)

Sept. 16 - Sept. 21 & Nov. 4 - Nov. 16	Zones 48, 49 and 56 combined, 57 to 62, and 67, including Leaf Lake Wildlife Management Unit * Designate Zone 48 for the combined Zones 48, 49, and 56.
Nov. 4 - Nov. 16	Zones 68 and 55 combined, including Bronson Recreation Site * Designate Zone 68 for the combined Zones 68 and 55.
Nov. 4 - Nov. 9	Zone 37, including Duck Mountain Provincial Park
Nov. 4 - Nov. 9	Zone 56G, Greenwater Provincial Park only * Designate 56G for Greenwater Provincial Park
Sept. 16 - Sept. 28 & Nov. 4 - Nov. 16	Zone 50, including Fort a la Corne Wildlife Management Unit

Zone Moose Quotas

Zone 37 -	(100)	Zone 60 -	(200)
Zones 48, 49 & 56 -	(300)	Zone 61 -	(100)
Zone 57 -	(200)	Zone 62 -	(50)
Zone 58 -	(200)	Zone 67 -	(200)
Zone 59 -	(400)	Zones 68 & 55 -	(200)

Zone 50, including Fort a la Corne Wildlife Management Unit - (100)
Zone 56G, Greenwater Provincial Park only - (50)

ANTELOPE

ANTELOPE SEASON (Either Sex)

Oct. 28 - Nov. 2	*	Zones 1 to 7, 9, 10, 8 and 11 combined, 12 and 13 combined, 14, 23 to 26

Antelope quotas will be set after July surveys have been completed. If an Antelope season is held, licences will be issued on a zone basis. List zone preference on application.

* **NOTE:** — Designate Zone 8 for combined Zones 8 and 11.
— Designate Zone 12 for combined Zones 12 and 13.
— Licences in combined zones will be valid in both zones designated.

MULE DEER

Please read the following information carefully concerning Mule Deer.

As in the past two years, the 1985 Mule Deer season will consist of an either-sex hunt and an antlerless hunt. The bag limit for the either-sex season remains 1 DEER, EITHER SEX but the bag limit for the antlerless season will be 2 DEER, ANTLERLESS ANIMALS ONLY.

Results of the 1984 draw are presented on the inside page. Using this information as a guide, the anticipated pool success in the 1985 draw (except for archery) is:

— almost all Super A Pool applicants should be drawn for an either-sex licence.
— approximately 50% of A Pool applicants should be drawn for an either-sex licence.
— A Pool applicants unsuccessful in the either-sex draw should be drawn for an antlerless licence if they apply.
— B Pool and C Pool applicants have almost no chance of being drawn for an either-sex licence but have an excellent chance of being drawn for an antlerless licence.

All applications received for Mule Deer are processed through the either-sex draw first. Applicants wishing to hunt in the antlerless season, should they not be drawn for an either-sex licence, will be placed in the antlerless draw if they "X" the antlerless box.

MULE DEER

EITHER-SEX MULE DEER SEASON (1 Deer)

Oct. 31 - Nov. 2		Zone quotas in each split per season:
split	Zones 2, 9, 10, 12, 13 and 14	Zone 2 (500), Zone 9 (250), Zone 10 (400), Zone 12 (75)
Nov. 4 - Nov. 6		Zone 13 (200), Zone 14 (300)
Nov. 4 - Nov. 9	Zones 1, 3 to 8, 19, 23 to 27, 29, 30 and 45, including Elbow Wildlife Management Unit and Cypress Hills Provincial Park (West Block)	
Nov. 11 - Nov. 16	Zone 46	

* **NOTE:** Zone 13 and Zone 14 Mule Deer hunters who wish to hunt in Saskatchewan Landing Provincial Park may hunt with muzzleloading rifles only.

Zone Mule Deer Quotas

Zone 1 -	(100)	Zone 7 -	(300)	Zone 14 -	(600)	Zone 27 -	(150)
Zone 2 -	(1000)	Zone 8 -	(50)	Zone 19 -	(200)	Zone 29 -	(100)
Zone 3 -	(300)	Zone 9 -	(500)	Zone 23 -	(200)	Zone 30 -	(100)
Zone 4 -	(75)	Zone 10 -	(800)	Zone 24 -	(200)	Zone 45 -	(50)
Zone 5 -	(300)	Zone 12 -	(150)	Zone 25 -	(150)	Zone 46 -	(100)
Zone 6 -	(400)	Zone 13 -	(400)	Zone 26 -	(200)		

ANTLERLESS MULE DEER

Definition of Antlerless Mule Deer: adult doe *or* fawn born in 1985

Bag Limit: 2 antlerless deer per licence

Licence Fee: remains at $30

Continued

Zone Choice: Antlerless Mule Deer applicants must apply for zones in which an antlerless season is scheduled.

Split Seasons: No choice is available between the different split seasons in a zone. You could be assigned either the 1st, 2nd or 3rd split season in the zone you select.

Pool Priority and Status: Antlerless Mule Deer licences will be issued on a priority pool basis, but getting drawn for antlerless mule deer will not affect your position in the 1986 either-sex mule deer draw. For example, if you are a "B" Pool applicant for mule deer this year and receive an antlerless licence, you will still advance to the "A" Pool for either-sex mulies in 1986.

Draw Procedure: Remember — All applications are processed through the either-sex draw first. Only those applicants who are not drawn for an either-sex licence and check the "antlerless"box are entered into the Antlerless Mule Deer draw.

ANTLERLESS MULE DEER

ANTLERLESS MULE DEER (2 Deer Antlerless Only)

Nov. 8 and Nov. 9 **split season** Nov. 11 and Nov. 12 **split season** Nov. 14, 15 and 16	Zone 10	Zone quotas in each split per season: 1st Split (1000) 2nd Split (1000) 3rd Split (1000)
Nov. 8 and Nov. 9 **split season** Nov. 11 and Nov. 12	Zones 2, 9, and 11 to 14	Zone quotas in each split per season: Zone 2 (750), Zone 9 (250) Zone 11 (225), Zone 12 (250) Zone 13 (400), Zone 14 (600)
Nov. 11 and Nov. 12	Zones 1, 3 and 5 to 8	No Split season. Zone quotas listed below.

Zone Antlerless Mule Deer Quotas

Zone 1 -	(75)	Zone 6 -	(500)	Zone 10 -	(3000)	Zone 14 -	(1200)
Zone 2 -	(1500)	Zone 7 -	(200)	Zone 11 -	(450)		
Zone 3 -	(100)	Zone 8 -	(50)	Zone 12 -	(500)		
Zone 5 -	(300)	Zone 9 -	(500)	Zone 13 -	(800)		

ARCHERY SEASONS (Bow and Arrow Only)

Antlerless Mule Deer licences will be available to archers in 1985. Those archers unsuccessful in the either-sex archery draw season will have an opportunity to hunt antlerless mule deer if they "X" the antlerless box. Bag limit for an antlerless licence: 2 antlerless mule deer

ARCHERY

Mule Deer (1 Deer, Either Sex)

Sept. 2 - Oct. 5	Zones 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46. (600 licences valid in any of these zones)
Sept. 9 - Sept. 21	Zones 9 and 10 combined (150), Zone 12 (50)

Antlerless Mule Deer (2 Deer, Antlerless Only)

Sept. 2 - Oct. 5	Zones 1 to 8, 11, 13, 14, 18 to 27, 29, 30, 45 and 46, including Saskatchewan Landing Provincial Park, the Cypress Hills Provincial Park (West Block) and the Elbow Wildlife Management Unit. (100 licences valid in any of these zones)
Sept. 9 - Sept. 21	Zones 9 and 10 Combined (150), Zone 12 (50)

Antelope (Either Sex)

Sept. 2 - Oct. 5	Zones 1 to 14, 19, 23 to 26 (300) licences valid in any of these zones.

Moose (Either Sex)

Sept. 16 - Sept. 28	Zones 68 and 55 combined, including Bronson Recreation Site (100)

NOTE: — Designate Zone 68 for combined Zones 68 and 55.
— Licences will be valid in both zones.

Results of the Big Game Draw will be available on August 14, 1985. The information number is 787-9071, phone lines will be open from 9 a.m. to 9 p.m. on August 14, 15 and 16; and from 9 a.m. to 5 p.m. Monday to Friday after August 16. Collect calls will not be accepted.

	Surname	First Name and Initial	Age	Registration No. / BEN. NO.
*1	Address	Town	Postal Code	SHSC ☐ CAF ☐ RCMP ☐
2	Surname	First Name and Initial	Age	Registration No. / BEN. NO.
	Address	Town	Postal Code	SHSC ☐ CAF ☐ RCMP ☐
3	Surname	First Name and Initial	Age	Registration No. / BEN. NO.
	Address	Town	Postal Code	SHSC ☐ CAF ☐ RCMP ☐
4	Surname	First Name and Initial	Age	Registration No. / BEN. NO.
	Address	Town	Postal Code	SHSC ☐ CAF ☐ RCMP ☐

Species

☐ Archery

☐ Antlerless (mule deer)

(For Office Use Only)

Zone Preference

1st	2nd	3rd	4th	5th	6th
☐	☐	☐	☐	☐	☐

One Applicant Must Sign Below

I, the undersigned, hereby certify all applicants are eligible and comply with the Firearm Safety Regulations. No false or misleading information is contained hereon.

Signature _____ Telephone No _____

1984 Big Game Draw Application

- Complete, in detail, the S.H.S.C. registration and beneficiary numbers.
- Print only.
- Licence fee $30.00 for each applicant.
- Please fill in return address on reverse side.
- **Applications with incomplete or incorrect information will be rejected.**

Appendix 3. 1985 Saskatchewan Big Game Hunter Questionnaire

A MESSAGE FROM THE DIRECTOR OF WILDLIFE

Fellow Sportsman:

We are again asking for your support with the Big Game Hunter Survey.

Please use the attached form to record your big game hunting activities, then mail the form in the enclosed postage paid envelope when you are finished hunting for the year.

As a hunter, you will be interested in the results of last year's survey. The tear-out portion, which is yours to keep, summarizes the 1984 big game harvest.

This survey provides the information we need to set responsible quotas and season dates and ensures that the sportsmen of Saskatchewan will continue to enjoy recreational hunting opportunities in the future. Because the names for the survey are selected randomly every year for statistical accuracy, you may receive a questionnaire two or more years in a row.

We greatly appreciate your assisting with the Big Game Hunter Survey. By doing so, you contribute to better wildlife management in Saskatchewan.

Hoping your 1985 hunting season is successful,

Dennis Sherratt

Dennis Sherratt
Director
Wildlife Branch
Saskatchewan Parks and Renewable Resources

1985 Big Game Hunter Survey

1 **If you did not purchase a 1985 Saskatchewan Big Game Licence please check (✓) here ☐ and return immediately. Thank You**

2 If you **did** purchase a 1985 Saskatchewan Big Game Licence please fill out the following questionnaire, and return it upon the completion of your hunting

3 Check (✓) each Saskatchewan Big Game Licence you purchased and each Big Game species you hunted in Saskatchewan in 1985. If you purchased a Special Draw license but did not hunt, please indicate which zone you were drawn in

4 **Please record all your hunting activities, whether or not you bagged an animal.**

— Use the following grid for recording hunting time (4 or more hours = 1 day; less than 4 hours = ½ day)

— If you hunted in more than one zone in a day, separate accordingly (see sample below)

— If you killed more than one animal use a separate line of kill information for each

1984 Big Game Harvest Statistics

SPECIES	LICENCE SALES	HARVEST	HUNTER SUCCESS	DAYS OF RECREATION
White-tailed Deer				
Rifle	51,897	38,820	75%	121,268
Archery	1,534	141	27%	5,382
Muzzleloading	656	453	70%	2,026
Moose	9,722	3,223	37%	35,384
Elk (Regular Bulls Only)	3,524	703	22%	12,094
Mule Deer				
Regular	5,750	5,100	94%	7,125
Antlerless	6,400	5,581	94%	5,933
Archery	804	270	39%	2,553
Antelope				
Rifle	3,017	2,031	81%	4,315
Archery	298	46	23%	529
Black Bear	4,814	1,778	46%	10,189
Woodland Caribou	171	23	15%	512

SPECIAL SEASONS, PARKS AND WILDLIFE MANAGEMENT UNITS

Management Unit/Park	Zone	Harvest		Hunter Success	
		Moose	Elk	Moose	Elk
Cypress Hills	6+7	—	65	—	64%
Moose Mountain	33	—	67	—	67%
Duck Mountain	37	31	—	31%	—
Bad Hills Corne	50	52	124	66%	56%
Thickwood Hills	54	—	—	—	—
Greenwater	56	N/A	92	N/A	37%

WHITE-TAILED DEER

Licences Purchased / Species Hunted: Regular ☐ ☐ | Antlerless ☐ ☐ | Archery ☐ ☐ | Muzzleloader ☐ ☐

MOOSE

Archery ☐ ☐ | Special Draw ☐ ☐ | Zone ☐ ☐ | Regular Bull ☐ ☐ | Cull ☐ ☐

ANTELOPE

Archery ☐ ☐ | Regular ☐ ☐ | Zone ☐ ☐

MULE DEER

Archery: Regular ☐ ☐ | Antlerless ☐ ☐ | Zone ☐ ☐

Rifle: Regular ☐ ☐ | Antlerless ☐ ☐ | Zone ☐ ☐

WOODLAND CARIBOU

☐ ☐

ELK

Special Draw ☐ ☐ | Zone ☐ ☐ | Regular ☐ ☐

BEAR

1st ☐ ☐ | 2nd ☐ ☐ | Free ☐ ☐

WHITE-TAILED DEER

SEASON DATE | Week Hunted (✓) | No. of Days Hunted: Zone | Days | Zone | Days | Zone | Days

REGULAR

Oct 7-13 ☐ | Nov 4-9 ☐ | Nov 11-16 ☐ | Nov 18-23 ☐ | Nov 25-30 ☐

ANTLERLESS

Dec 2-7 ☐

ARCHERY

Sept 2-13 ☐ | Sept 16-26 ☐ | Sept 30-Oct 12 ☐

MUZZLELOADING

Sept 30-Oct 5 ☐ | Oct 7-12 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Buck | Doe | Fawn

Mo | Day | Zone | Animal was (✓): Buck | Doe | Fawn

MOOSE

SEASON DATE | Week Hunted (✓) | No. of Days Hunted: Zone | Days | Zone | Days | Zone | Days

REGULAR (BULLS & CALVES ONLY)

Sept 2-21 ☐ | Oct 7-12 ☐ | Nov 4-16 ☐ | Nov 18-23 ☐ | Nov 25-30 ☐

SPECIAL (EITHER-SEX)

Sept 16-21 ☐ | Sept 23-28 ☐ | Nov 4-9 ☐ | Nov 11-16 ☐

ARCHERY (EITHER-SEX)

Sept 16-26 ☐

GUIDED (BULLS & CALVES ONLY)

Sept 9-Nov 30 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Bull | Cow | Calf

ANTELOPE

REGULAR

Oct 28-Nov 2 ☐

ARCHERY

Sept 2-Oct 5 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Buck | Doe | Kid

MULE DEER

SEASON DATE | Week Hunted (✓) | No. of Days Hunted: Zone | Days | Zone | Days | Zone | Days

REGULAR (EITHER-SEX)

Oct 31-Nov 2 ☐ | Nov 4-6 ☐ | Nov 7-9 ☐ | Nov 11-16 ☐

ANTLERLESS

Nov 4-9 ☐ | Nov 11-17 ☐ | Nov 14-16 ☐

ARCHERY

Sept 2-Oct 5 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Buck | Doe | Fawn

Mo | Day | Zone | Animal was (✓): Buck | Doe | Fawn

WOODLAND CARIBOU

Sept 9-21 ☐ | Sept 30-Oct 12 ☐ | Nov 4-16 ☐ | Nov 18-30 ☐ | Dec 2-7 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Bull | Cow | Calf

ELK

SEASON DATE | Week Hunted (✓) | No. of Days Hunted: Zone | Days | Zone | Days | Zone | Days

REGULAR (BULLS ONLY)

Sept 16-21 ☐ | Sept 23-28 ☐ | Dec 2-7 ☐

REGULAR (EITHER-SEX WMZ53)

Nov 4-Dec 14 ☐ 53 ☐

SPECIAL (EITHER-SEX)

Sept 2-21 ☐ 50 ☐ | Oct 21-28 ☐ | Oct 29-Nov 2 ☐ | Nov 4-16 ☐ 50 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Bull | Cow | Calf

BEAR

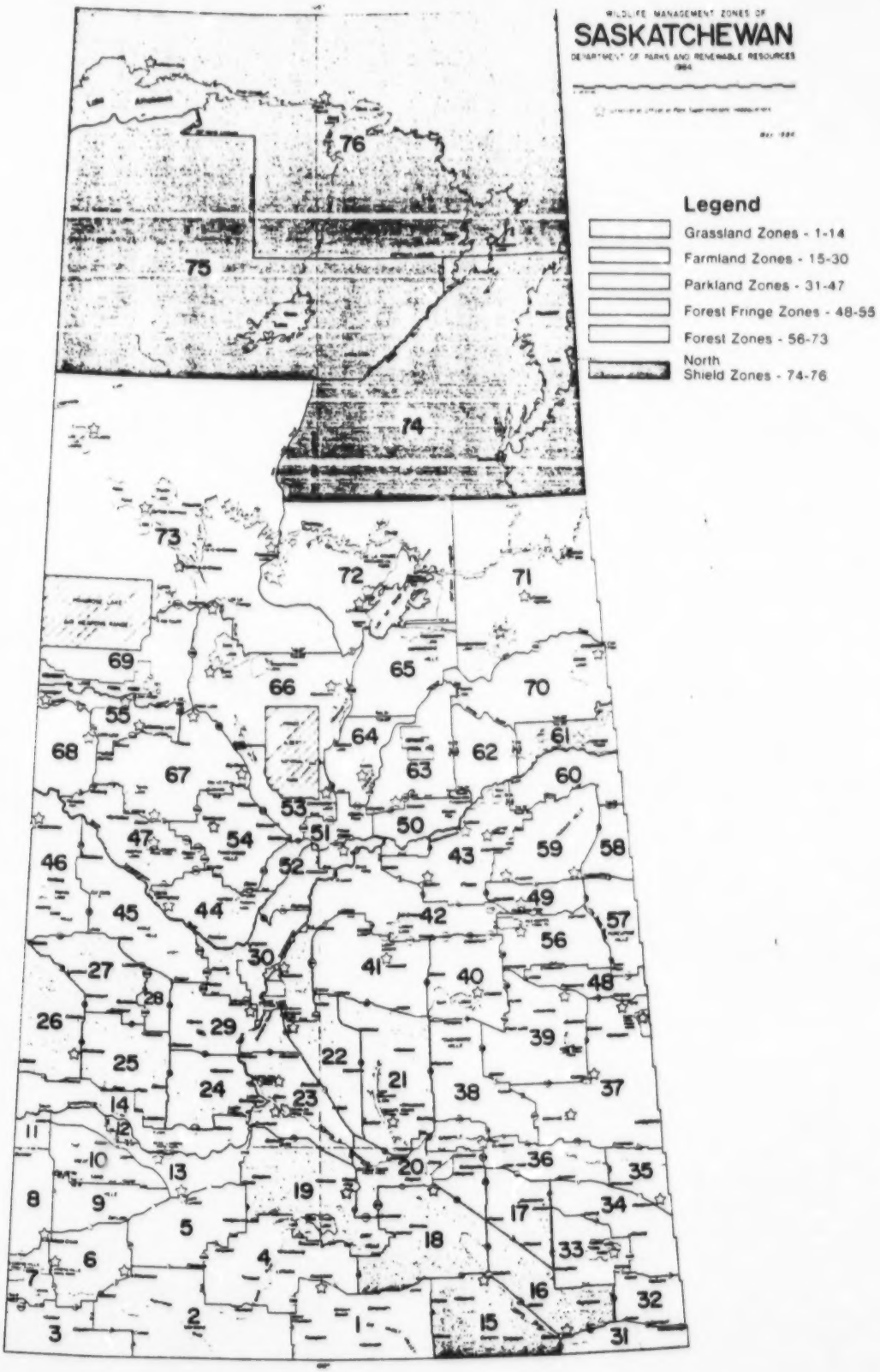
April 15-May 4 ☐ ✓ ☐ ☐ ☐ ☐ ☐ | May 6-18 ☐ | May 20-June 1 ☐ | June 3-20 ☐ | Aug 26-Sept 14 ☐ | Sept 16-28 ☐ | Sept 30-Oct 19 ☐

KILL INFORMATION

Mo | Day | Zone | Animal was (✓): Bear ☐ | Sow ☐ | Cub ☐

Mo | Day | Zone | Animal was (✓): Bear ☐ | Sow ☐ | Cub ☐

№ 2999


WILDLIFE MANAGEMENT ZONES OF
SASKATCHEWAN
DEPARTMENT OF PARKS AND RENEWABLE RESOURCES
1984
Legend
Grassland Zones - 1-14
Farmland Zones - 15-30
Parkland Zones - 31-47
Forest Fringe Zones - 48-55
Forest Zones - 56-73
North Shield Zones - 74-76

Appendix 4 . 1985 Cooperative Wildlife Management Study Form.

Saskatchewan Parks and Renewable Resources

Co-operative Wildlife Management Study

Species _____

GMZ

Year 19

Month (01—12)

Day (01—31)

Time _____ A.M. _____ P.M.

Temperature _____ °C

Weather: Clear - 1, Cloudy - 2, Calm - 1, Windy - 2

Habitat: Stubble Field -1, Cultivated Field -2, Pasture/Hayland -3, Wetlands -4, Shrub/Tree -5, Forest -6

Herd Structure — Totals: Adult Males, Adult Females, Fawns/Calves

Productivity (Record Only When Positive) Number of Females With: One Calf/Fawn, Two Calves/Fawns, Three Calves/Fawns

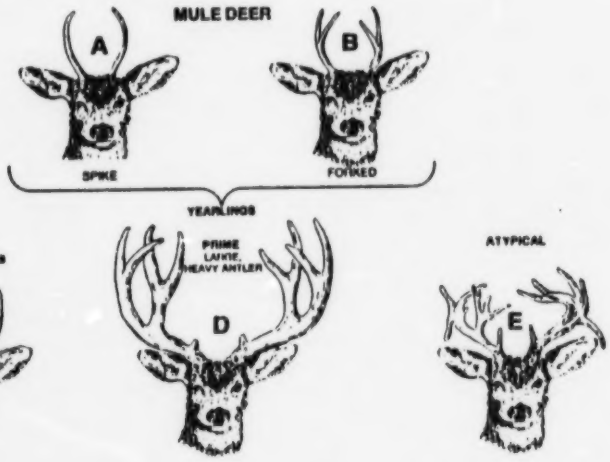
Antler Configuration — Mark the number of males observed in each class. Yearling: A, B, C. Adult: D, E. Atypical: F

Name: _____

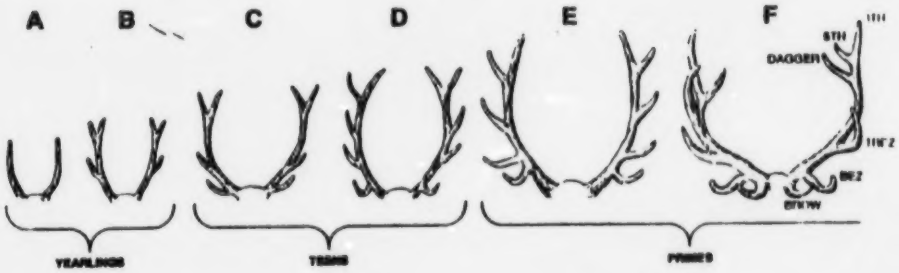
Comments:

WILDLIFE BRANCH REGINA COPY

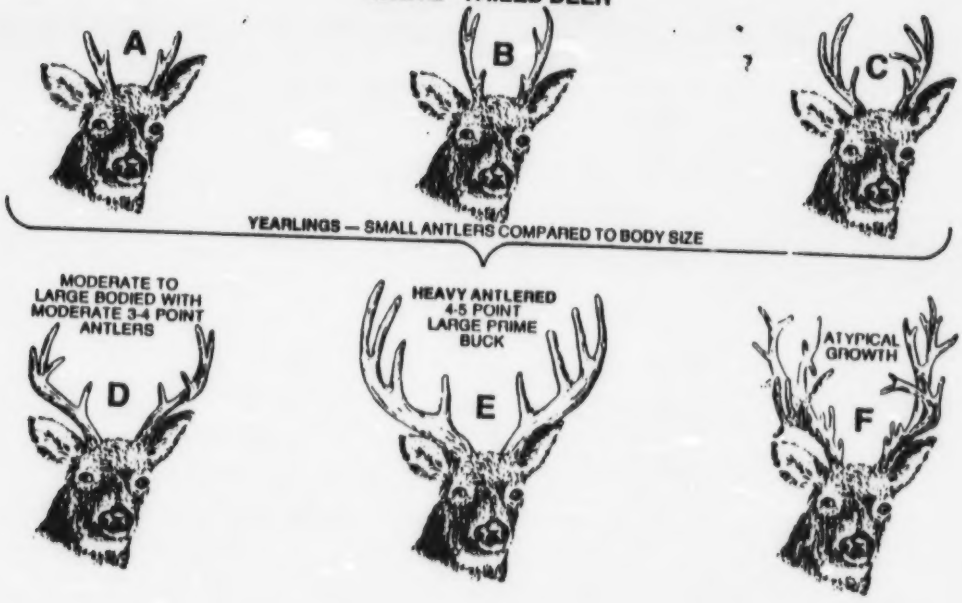
MULE DEER



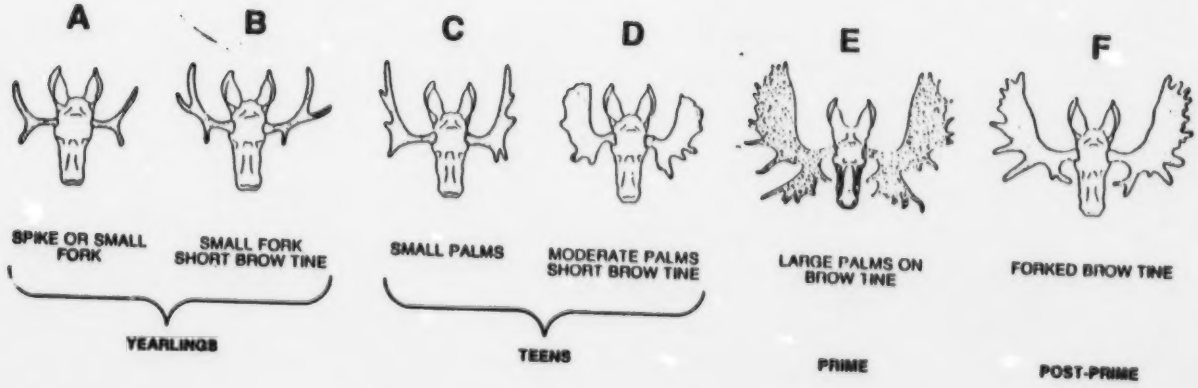
ELK



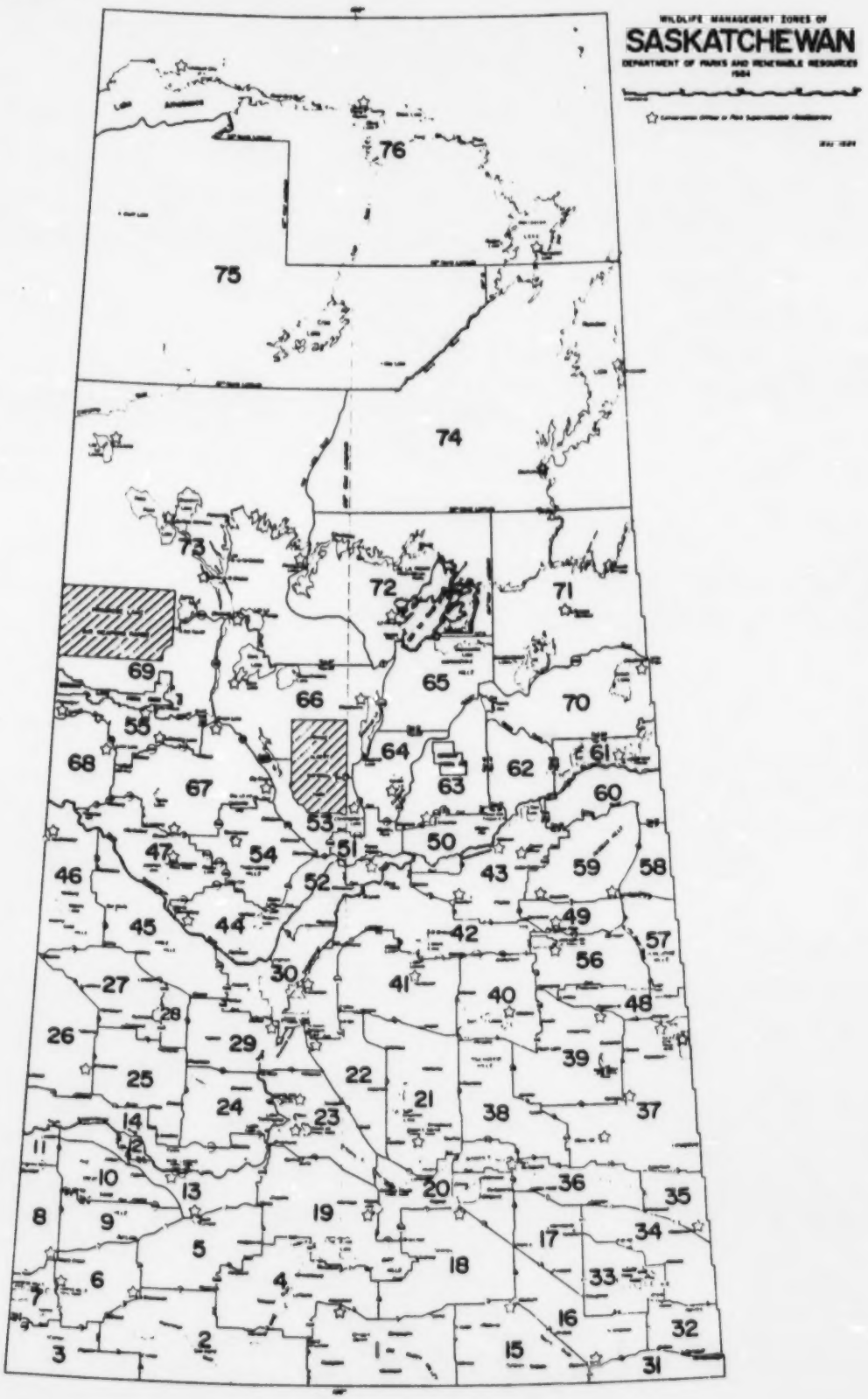
WHITE - TAILED DEER



MOOSE



Appendix 5 Wildlife Management Zones (WMZ) - 1985



Appendix 6. 1986 Big Game Hunting Season Regulations

1986 Special Big Game Seasons

Saskatchewan Residents Only by Application and Draw

Big Game

Species	Wildlife Management Zones Open	Season Dates (Inclusive)	Limit	Additional Information
Antelope (tentative)	Zones 1 to 14, 19 and 23 to 26	Oct. 29 - Nov. 5	one antelope, either sex	– Antelope licence quotas will be set after July aerial surveys
Antelope (Archery) (tentative)	Zones 1 to 15, 18, 19 and 23 to 26	Sept. 1 - Oct. 4	one antelope, either sex	– Antelope archery licences are valid in any open zone during the archery season only
Special Elk	Zone 6 and that portion of Zone 7 east of Highway No. 271 and Grid Road No. 615	Oct. 20 - Oct. 26	one elk, either sex	– Licence quotas (in brackets) for each zone: 6 and the east portion of 7 combined (100), the west portion of 7(200), 39(100), 50(275), 48, 49, 56 and 57 combined (500), 54(50). **Note: Some portions of the Meeting Lake PFRA Pasture in Zone 54 will be closed to elk hunting. Watch for "No Hunting" signs.**
	That portion of Zone 7 west of Highway No. 271 and Grid Road No. 615, including Cypress Hills (West Block) Provincial Park	Oct. 20 - Oct. 26 or Oct. 27 - Nov. 1	one elk, either sex	
	Zone 33, including Moose Mountain Provincial Park	Oct. 27 - Nov. 1	one elk, either sex	
	That portion of Zone 50 south of Highway No. 55, including Fort a la Corne Wildlife Management Unit	Sept. 1 - Sept. 20 and Nov. 3 - Nov. 15	one elk, either sex	
	Zones 48, 49, 56 and 57, including Greenwater Provincial Park	Oct. 20 - Oct. 25	one elk, either sex	
	That portion of Zone 54 south of Highway No. 3	Nov. 10 - Nov. 16	one elk, either sex	
Special Moose	Zone 8	Oct. 27 - Nov. 1	one moose, either sex	– Licence quotas (in brackets) for each zone: 6(25), 37(100), 50(100), 48, 49 and 56 combined (300), 57(200), 58(200), 59(400), 60(200), 61(100), 62(50), 67(150), 55 and 68 combined (200), Greenwater Provincial Park (50).
	Zones 48, 49, 56, 57 to 62 and 67, including Leaf Lake Wildlife Management Unit	Sept. 15 - Sept. 20 and Nov. 3 - Nov. 15	one moose, either sex	
	Zones 55 and 68, including Bronson Forest Recreation Site	Nov. 3 - Nov. 15	one moose, either sex	
	Zone 37, including Duck Mountain Provincial Park	Nov. 3 - Nov. 8	one moose, either sex	
	Greenwater Provincial Park Only	Nov. 3 - Nov. 8	one moose, either sex	
	Zone 50, including Fort a la Corne Wildlife Management Unit	Sept. 15 - Sept. 27 and Nov. 3 - Nov. 15	one moose, either sex	
Moose (Archery)	Zones 55 and 68, including Bronson Forest Recreation Site	Sept. 15 - Sept. 27	one moose, either sex	– Archery moose licences valid only during the archery season; licence quota (100) for Zones 55 and 68 combined
Mule Deer	Zones 1, 3 to 8, 11, 19, 23 to 27, 29, 30 and 45, including Elbow Wildlife Management Unit, and Cypress Hills (West Block) Provincial Park	Nov. 3 - Nov. 8	one mule deer, either sex	– Licence quotas (in brackets) for each zone: 1(100), 2(1000), 3(300), 4(100), 5(300), 6(400), 7(300), 8(50), 9(500), 10(800), 11(50), 12(150), 13(400), 14(600), 19(200), 23(250), 24(250), 25(200), 26(250), 27(250), 29(150), 30(150), 45(100), 46(150). **Note: Primitive weapons only in Saskatchewan Landing Provincial Park.**
	Zone 46	Nov. 10 - Nov. 15	one mule deer, either sex	
	Zones 2, 9, 10, 12, 13 and 14, including Saskatchewan Landing Provincial Park	Nov. 3 - Nov. 5 or Nov. 6 - Nov. 8	one mule deer, either sex	
Antlerless Mule Deer	Zones 2, 6, 9, 10, 12, 13 and 14, including Saskatchewan Landing Provincial Park	Nov. 10 - Nov. 12 or Nov. 13 - Nov. 15	one antlerless mule deer	– "Antlerless Mule Deer" means a doe or a 1986 fawn.
	Zones 1, 3, 4, 5, 7, 8, 11 and 19, including Cypress Hills (West Block) Provincial Park	Nov. 10 - Nov. 12	one antlerless mule deer	– Licence quotas (in brackets) for each zone: 1(75), 2(1000), 3(75), 4(150), 5(300), 6(500), 7(200), 8(80), 9(500), 10(1200), 11(100), 12(300), 13(800), 14(500), 19(150). **Note: Primitive weapons only in Saskatchewan Landing Provincial Park.**
Mule Deer (Archery)	Zones 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 1 - Oct. 4	one mule deer, either sex	– Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (800), 9 and 10 combined (150), 12(50) **Note: The opening date in Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks is delayed until Sept. 3.**
	Zones 9, 10 and 12	Sept. 8 - Sept. 20	one mule deer, either sex	– Archery licences valid only in the archery season.
Antlerless Mule Deer (Archery)	Zones 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 1 - Oct. 4	one antlerless mule deer	– Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (200), 9 and 10 combined (150), 12(50). **Note: The opening date in Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks is delayed until Sept. 3.**
	Zones 9, 10 and 12	Sept. 8 - Sept. 20	one antlerless mule deer	
Mule Deer (Muzzleloading Rifles)	Zones 1 to 10, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 29 - Oct. 11	one mule deer, either sex	– Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (100), 9 and 10 combined (50).
Antlerless Mule Deer (Muzzleloading Rifles)	Zones 1 to 10, 13, 14, 18 to 27, 29, 30, 45 and 46, including Elbow Wildlife Management Unit; and Saskatchewan Landing and Cypress Hills (West Block) Provincial Parks	Sept. 29 - Oct. 11	one antlerless mule deer	– Licence quotas (in brackets) for each zone: 1 to 8, 13, 14, 18 to 27, 29, 30, 45 and 46 combined (100), 9 and 10 combined (50)

1986 Big Game Seasons

Big Game

Species	Wildlife Management Zones Open	Season Dates (Inclusive)	Limit	Additional Information
White-tailed Deer (Primitive Weapons, Sask. Residents Only)	Zones 1 to 6, 11 to 37, 39 to 76, including Elbow, Fort a la Corne, Great Bend, and Horseshide Lake Wildlife Management Units; Clearwater River, Duck Mountain, Greenwater, Lac La Ronge, Meadow Lake, Nipawin and Saskatchewan Landing Provincial Parks and Bronson Forest Recreation Site	Archery Sept. 1 - Oct. 11 Muzzleloading Rifles Sept. 29 - Oct. 11	one white-tailed deer, either sex	– An unsuccessful archer may purchase a first regular licence to hunt white-tailed deer by turning in his unused archery licence at any department office. – White-tailed deer archery licences are valid in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30 during the Nov. 17 to Nov. 29 season. **Note: The opening date in Duck Mountain, Greenwater, Meadow Lake and Saskatchewan Landing Provincial Parks and Bronson Forest Recreation Site is delayed until Sept. 3.**
	Zones 9 and 10	Archery Sept. 6 - Oct. 11 Muzzleloading Rifles Sept. 29 - Oct. 11	one white-tailed deer, either sex	– Muzzleloading rifle white-tailed deer licences are valid only in the muzzleloading season, except in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30
	Zone 38	Archery Sept. 1 - Oct. 11 Muzzleloading Rifles Sept. 29 - Oct. 11	one antlered white-tailed deer	– "Antlered White-tailed Deer" means any deer with an antler or antlers at least 10 centimetres in length as measured from the outside of the skull to the tip.
White-tailed Deer (Sask. Residents, Canadian Residents and Non-residents)	Zones 56 to 61, 66 and 69, including Leaf Lake Wildlife Management Unit; Greenwater and Meadow Lake Provincial Parks	Oct. 6 - Oct. 18 and Nov. 10 - Nov. 29	one white-tailed deer, either sex	
	Zones 62 to 65, 67 and 68, including Nipawin Provincial Park and Bronson Forest Rec Site	Nov. 10 - Nov. 29	one white-tailed deer, either sex	
	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Nov. 3 - Nov. 29	one white-tailed deer, either sex	
White-tailed Deer (Sask. Residents and Canadian Residents)	Zones 1 to 15, 18 to 30, 35, 36, and 40 to 55, including Brokenshell No. 1 and No. 2, Cookson, Estevan-Cambria, Elbow, Fort a la Corne, Horseshide Lake, Last Mountain Lake and Lomond No. 3 (at Maxim) Wildlife Management Units; and Saskatchewan Landing Provincial Park	Sask. Residents Nov. 17 - Nov. 29 Canadian Residents Nov. 24 - Nov. 29	one white-tailed deer, either sex	– Holders of unused primitive weapons white-tailed deer licences may hunt white-tailed deer in the Shotgun-Archery-Muzzleloader areas of Zones 20 and 30 during the regular season. – **Please refer to enclosed map for the portion of Management Zones 20 and 30 restricted to shotgun, archery, and muzzleloading rifle hunting only.** – **Hunters will be restricted to designated trails within the Cookson Wildlife Management Unit.** **Note: Primitive weapons only in Saskatchewan Landing Provincial Park.**
	Zones 16, 17, 31 to 34 and 39, including Moose Mountain Provincial Park	Sask. Residents Nov. 17 - Nov. 29	one white-tailed deer, either sex	– **"Roads and Trails Only". Hunters in Zones 15 to 17, 20 and 30 to 34 must keep vehicles on roads and road allowances with trails.**
	Zone 38	Sask. Residents Nov. 17 - Nov. 29	one antlered white-tailed deer	
	Zone 37, including Duck Mountain Provincial Park	Sask. Residents Nov. 17 - Nov. 22 Sask. Residents Nov. 24 - Nov. 29	one antlered white-tailed deer one white-tailed deer, either sex	– "Antlered White-tailed Deer" means any deer with an antler or antlers at least 10 centimetres in length as measured from the outside of the skull to the tip.
Antlerless White-tailed Deer (WMZ 2 & 6 Mule Deer Licence Holders Only)	Zones 2 and 6	Various seasons between Nov. 3 and Nov. 15 inclusive	one antlerless white-tailed deer	– Hunters may purchase an antlerless white-tailed deer licence at **department** offices upon proof of possession of a regular rifle (either sex or antlerless) mule deer licence. – Antlerless white-tailed deer licences are valid only in Zones 2 or 6 during the appropriate mule deer season. – "Antlerless White-tailed Deer" means a doe or 1986 fawn.
White-tailed Deer with Guided Moose	Zones 60, 61 and 62	Persons holding valid white-tailed deer licences and possessing guided moose licences Oct. 6 - Oct. 26 and Nov. 3 - Nov. 6	one white-tailed deer, either sex	– Services of a registered guide must be used.
	Zone 69	Persons holding valid white-tailed deer licences and possessing guided moose licences Sept. 8 - Sept. 20 and Nov. 3 - Nov. 6	one white-tailed deer, either sex	
	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Persons holding valid white-tailed deer licences and possessing guided moose licences Sept. 8 - Sept. 20 and Oct. 6 - Oct. 18	one white-tailed deer, either sex	

Big Game

Regular Elk (Sask. Residents Only)	Zones 43, 48, 49, 50 (North of Highway 55), 56 to 64, 66 and 69, including Nipawin Provincial Park, and the northeast portion of Meadow Lake Provincial Park north of the 17th base line	Sept. 15 - Sept. 27	one antlered elk	Antlers [illegible] length as measured from the [illegible] skull to the tip **Watch for signs in Meadow Lake Provincial Park.** **Note: Hunters will be restricted to designated trails within the Cookson Wildlife Management Unit.**
	Zone 53, including Cookson Wildlife Management Unit	Nov. 24 - Dec. 13	one elk, either sex	
Regular Moose (Sask. Residents Only) **Early Season**	Zones 43, 48, 49, 53, 56 to 67 and 69, including Cookson and Leaf Lake Wildlife Management Units; and Nipawin Provincial Park	Oct. 6 - Oct. 11	one bull or one 1986 calf moose	– "Bull Moose" means a male moose one or more years old. "Calf Moose" means any moose born in 1986. "Cow Moose" means a female moose one or more years old.
	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Sept. 1 - Sept. 20	one bull or one 1986 calf moose	– Successful applicants for a special moose licence are not eligible to purchase a regular moose licence.
Late Season	Zones 43, 48, 49 and 56 to 59, including Leaf Lake Wildlife Management Unit	Nov. 17 - Nov. 29	one bull or one 1986 calf moose	– The antlers of bull moose and the lower jaw of calf moose must accompany the carcass.
	Zones 53, 55 and 60 to 69, including Cookson Wildlife Management Unit, Nipawin Provincial Park and Bronson Forest Recreation Site	Nov. 17 - Nov. 22	one bull or one 1986 calf moose	
	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Nov. 3 - Nov. 29	one bull or one 1986 calf moose	
Guided Moose (Canadian Residents and Non-residents)	Zones 60, 61 and 62	Oct. 6 - Oct. 25 and Nov. 3 - Nov. 22	one bull or one 1986 calf moose	– The antlers of bull moose and the lower jaw of calf moose must accompany the carcass. – Services of a registered guide must be used.
	Zone 69	Sept. 8 - Sept. 20, Oct. 6 - Oct. 11 and Nov. 3 - Nov. 22	one bull or one 1986 calf moose	– 400 guided moose licences are available directly from outfitters. Quotas (in brackets) for each zone: 60(60), 61(115), 62(15), 69(15), 70(10), 71(45), 72(45), 73(10), 74(45), 75(10), 76(30).
	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Sept. 8 - Sept. 20, Oct. 6 - Oct. 18 and Nov. 3 - Nov. 29	one bull or one 1986 calf moose	
Woodland Caribou (Sask. Residents, Canadian Residents and Non-residents)	Zones 70 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Sept. 8 - Sept. 20, Oct. 6 - Oct. 18 and Nov. 3 - Dec. 6	one woodland caribou, either sex	Canadian residents and non-residents must use the services of a registered guide when hunting caribou.
Barren-ground Caribou (Sask. Residents of Zone 76 only)	Zone 76	Nov. 17 - Mar. 14, 1987	two barren-ground caribou, either sex; separate licences required	– "Resident of Zone 76" means a Saskatchewan resident who has lived in Zone 76 for three months immediately preceding the date of licence purchase.
Bear (Sask. Residents, Canadian Residents and Non-residents)	Zones 37, 42, 43 and 48 to 76, including Cookson, Horsehide Lake and Leaf Lake Wildlife Management Units	Aug. 25 - Oct. 18	two bear, either sex; separate licences required	– Unused spring bear licences are valid in fall seasons. **Note: A person hunting in Zones 58 to 61 during an August, September or October big game season may obtain two free bear seals. One bear, either sex, can be taken per seal while hunting under a valid big game licence. Once the big game licence has been filled, the free bear seals are no longer valid.**
	Clearwater River, Lac La Ronge, Meadow Lake, Nipawin and Duck Mountain Provincial Parks; and Bronson Forest Recreation Site	Sept. 3 - Oct. 18	two bear, either sex; separate licences required	
	Fort a la Corne Wildlife Management Unit only	Sept. 22 - Oct. 18	two bear, either sex; separate licences required	– Zones 58 to 61 free bear seals [illegible] available at department offices [illegible]

Appendix 7 . AREAS OF NEW WILDLIFE MANAGEMENT ZONES

Zone	Area in Km^2	Zone	Area in Km^2
P.A.N.P.	3 874	PRIMROSE A.W.R.	5 987
1	8 321	2	10 640
3	4 297	4	8 118
5	5 966	6	4 195
7	1 895	8	3 393
9	3 435	10	3 546
11	985	12	344
13	4 084	14	5 580
GRASSLAND TOTAL			64 799
15	6 734	16	5 307
17	3 823	18	7 448
19	9 221	20	5 534
21	8 382	22	4 732
23	5 740	24	4 829
25	5 818	26	4 415
27	4 914	28	1 355
29	5 333	30	7 251
FARMLANDS TOTAL			90 826
31	2 522	32	2 790
33	3 883	34	5 386
35	2 614	36	5 185
37	11 315	38	6 412
39	7 603	40	5 414
41	7 212	42	7 413
43	6 777	44	4 577
45	7 865	46	5 959
47	5 719		
PARKLANDS TOTAL			98 446
48	2 531	49	2 395
50	3 333	51	2 873
52	2 913	53	2 772
54	5 696	55	3 749
FOREST FRINGE TOTAL			26 263
56	4 727	57	3 308
58	2 245	59	5 862
60	3 837	61	3 040
62	3 735	63	5 659
64	3 544	65	6 521
* 66	11 280	67	8 675
68	4 158	** 69	7 750
70	8 499	71	17 990
72	18 381	73	45 909
FOREST TOTAL			165 120
74	45 416	75	56 558
76	79 825		
NORTHERN SHIELD TOTAL			181 799
PROVINCIAL TOTAL			637 113

* excludes P.A.N.P.
** excludes Primrose A.W.R.

Appendix 8. Saskatchewan 1985 Game Bird Seasons

Upland Game Birds

	Wildlife Management Zones Open	Season Dates (Inclusive)	Bag Limit
Sharp-tailed Grouse	Zones 1 to 47 including Elbow, Estevan-Cambria, Lomond No. 3 (at Mauvis) and Last Mountain Lake Wildlife Management Units	Sept. 30 - Nov. 16	3 daily 6 possession
Non-residents of Canada may not hunt Sharp-tailed Grouse in Zones 9 to 14, and 25 to 28	Zones 48 to 76, including Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne Wildlife Management Unit and Bronson Forest Recreation Site	Sept. 9 - Nov. 30	3 daily 6 possession
Hungarian Partridge	Zones 1 to 14 and 19	Sept. 23 - Nov. 16	10 daily 20 possession
Non-residents of Canada may not hunt Hungarian Partridge in Zones 9 to 14, and 25 to 28	Zones 15 to 18 and 20 to 28 including Last Mountain Lake Wildlife Management Unit and starting Sept. 20, Elbow, Estevan-Cambria and Lomond No. 3 (at Mauvis) Wildlife Management Units	Sept. 23 - Nov. 16	5 daily 10 possession
	Zones 27 to 59, including Fort a la Corne Wildlife Management Unit	Sept. 23 - Nov. 16	3 daily 6 possession
Pheasants (Cocks Only)	Zones 1 to 28, including Elbow, Estevan-Cambria and Lomond No. 3 (at Mauvis) Wildlife Management Units	Oct. 2 - Nov. 16	3 daily 6 possession
Sask. Residents Only	Zones 1 to 24, 29, 31, 35 and 36, including Elbow, Estevan-Cambria and Lomond No. 3 (at Mauvis) Wildlife Management Units	Dec. 2 - Dec. 21	3 daily 6 possession
Ruffed Grouse	Zones 1 to 47, including Last Mountain Lake and Elbow Wildlife Management Units; and Moose Mountain and Duck Mountain Provincial Parks	Sept. 23 - Nov. 16	5 daily 10 possession
	Zones 48 to 76, including Fort a la Corne Wildlife Management Unit; Greenwater, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks, and Bronson Forest Recreation Site	Sept. 9 - Nov. 30	5 daily 10 possession
Spruce Grouse	Zone 43	Sept. 23 - Nov. 16	5 daily 10 possession
	Zones 48 to 76, including Fort a la Corne Wildlife Management Unit; Meadow Lake, Nipawin and Lac La Ronge Provincial Parks, and Bronson Forest Recreation Site	Sept. 9 - Nov. 30	5 daily 10 possession
Ptarmigan	Zones 61 to 66, 69 to 76, including Lac La Ronge Provincial Park	Nov. 4 - Feb. 1/86	10 daily 20 possession

Waterfowl

Ducks	Zones 1 to 42, 44 to 47, and 52, including Elbow and Velsport Wildlife Management Units; and starting Sept. 16, Last Mountain Lake Wildlife Management Unit	Sept. 11 - Dec. 7	4 daily 8 possession
	Zones 43, 48 to 51, and 53 to 76, including Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Horseshoe Lake and Fort a la Corne Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 2 - Dec. 7	4 daily 8 possession
Coots and Common Snipe	Zones 1 to 42, 44 to 47, and 52, including Elbow and Velsport Wildlife Management Units; and starting Sept. 16, Last Mountain Lake Wildlife Management Unit	Sept. 11 - Dec. 7	10 daily 20 possession
	Zones 43, 48 to 51, and 53 to 76, including Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Horseshoe Lake and Fort a la Corne Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 2 - Dec. 7	10 daily 20 possession
Sandhill Cranes	Zones 18, 21 to 24, 29, 30, 37 to 42, 44 and 52	Sept. 2 - Sept. 17	5 daily 10 possession
	Zones 11 to 14	Sept. 11 - Sept. 24	5 daily 10 possession
Geese Goose season for Canadian Residents and Non-residents of Canada begins on October 2 in Zones 1 to 52, 54, 56 and 57	Zones 1 to 14, 19 and 22 to 29, including Elbow Wildlife Management Unit	Sept. 25 - Dec. 7	5 daily, (2 only may be white-fronted geese) 10 possession (4 only may be white-fronted geese)
	Zones 15, 16, 17, 18, 20, 21, 30 to 42, 44 to 47, and 52, including Velsport and Last Mountain Lake Wildlife Management Units	Sept. 18 - Dec. 7	5 daily (3 only may be white-fronted geese) 10 possession (6 only may be white-fronted geese
	Zones 43, 48 to 51, and 53 to 76, including Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Horseshoe Lake and Fort a la Corne Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 2 - Dec. 7	5 daily (3 only may be white-fronted (Greek) 10 possession (6 only may be white-fronted geese)
	Note: Starting Oct. 15: 3 additional Snow or Ross' geese may be taken daily and 6 additional Snow or Ross' geese may be kept in possession.		
	Note: From Sept. 2 to Oct. 19, inclusive, in Zones 1 to 58, 67, 68 and 69, open season for geese includes that portion of the day from one-half hour before sunrise to 12 noon local time. (From Oct. 21 to Dec. 7 geese may be hunted all day in all zones.)		

Appendix 9. Saskatchewan 1986 Game Bird Seasons

1986 Game Bird Seasons

Upland Game Birds

Species	Wildlife Management Zones Open	Season Dates (Inclusive)	Bag Limit
Sharp-tailed Grouse	Zones 1 to 47, including Last Mountain Lake Wildlife Management Unit; and starting Sept. 29, Elbow, Estevan-Cambria and Lomond No. 3 (at Maxim) Wildlife Management Units	Sept. 22 - Nov. 15	3 daily 6 possession
Non-residents of Canada may not hunt Sharp-tailed Grouse in Zones 9 to 14 and 25 to 28	Zones 48 to 76, including Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne Wildlife Management Unit and Bronson Forest Recreation Site	Sept. 8 - Nov. 29	3 daily 6 possession
Hungarian Partridge	Zones 1 to 15, 18, 19 and 31; and starting Sept. 29, Estevan-Cambria and Lomond No. 3 (at Maxim) Wildlife Management Units	Sept. 22 - Nov. 15	10 daily 20 possession
Non-residents of Canada may not hunt Hungarian Partridge in Zones 9 to 14 and 25 to 28	Zones 16, 17 and 20 to 29 including Last Mountain Lake Wildlife Management Unit; and starting Sept. 29, Elbow Wildlife Management Unit	Sept. 22 - Nov. 15	5 daily 10 possession
	Zones 30 and 32 to 55, including Fort a la Corne Wildlife Management Unit	Sept. 22 - Nov. 15	3 daily 6 possession
Pheasants (Cocks Only) Sask. Residents Only may hunt Pheasants	Zones 1 to 36, including Elbow, Estevan-Cambria and Lomond No. 3 (at Maxim) Wildlife Management Units	Oct. 1 - Nov. 15	3 daily 6 possession
Ruffed Grouse	Zones 1 to 47, including Last Mountain Lake and Elbow Wildlife Management Units; and Moose Mountain and Duck Mountain Provincial Parks	Sept. 22 - Nov. 15	5 daily 10 possession
	Zones 48 to 76, including Fort a la Corne Wildlife Management Unit; Clearwater River, Greenwater, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; and Bronson Forest Recreation Site	Sept. 8 - Nov. 29	5 daily 10 possession
Spruce Grouse	Zone 43	Sept. 22 - Nov. 15	5 daily 10 possession
	Zones 48 to 76, including Fort a la Corne Wildlife Management Unit; Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; and Bronson Forest Recreation Site	Sept. 8 - Nov. 29	5 daily 10 possession
Ptarmigan	Zones 61 to 66, 69 to 76, including Clearwater River and Lac La Ronge Provincial Parks	Nov. 17 - Mar. 14, 1987	10 daily 20 possession

Waterfowl

Ducks	Zones 1 to 42, 44 to 47, and 52, including Elbow and Valeport Wildlife Management Units; and starting Sept. 17, Last Mountain Lake Wildlife Management Unit	Sept. 15 - Dec. 13	6 daily (4 only may be mallards) 12 possession (8 only may be mallards)
	Zones 43, 48 to 51, and 53 to 76, including Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne and Horsehide Lake Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 1 - Dec. 13	6 daily (4 only may be mallards) 12 possession (8 only may be mallards)
Coots and Common Snipe	Zones 1 to 42, 44 to 47, and 52, including Elbow and Valeport Wildlife Management Units; and starting Sept. 17, Last Mountain Lake Wildlife Management Unit	Sept. 15 - Dec. 13	10 daily 20 possession
	Zones 43, 48 to 51, and 53 to 76, including Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne and Horsehide Lake Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 1 - Dec. 13	10 daily 20 possession
Sandhill Cranes Non-residents of Canada may not hunt Sandhill Cranes	Zones 19, 21 to 24, 29, 30, 37 to 42, 44 and 52	Sept. 1 - Sept. 16	5 daily 10 possession
	Zones 11 to 14	Sept. 10 - Sept. 23	5 daily 10 possession
Geese Goose season for Canadian Residents and Non-residents of Canada begins on October 1 in Zones 1 to 52, 54, 56 and 57	Zones 1 to 14, 19, and 22 to 29, including Elbow Wildlife Management Unit	Sept. 24 - Dec. 13	5 daily (2 only may be white-fronted geese) 10 possession (4 only may be white-fronted geese)
	Zones 15 to 18, 20, 21, 30 to 42, 44 to 47, and 52, including Valeport and Last Mountain Lake Wildlife Management Units	Sept. 17 - Dec. 13	5 daily (3 only may be white-fronted geese) 10 possession (6 only may be white-fronted geese)
	Zones 43, 48 to 51, and 53 to 76, including Clearwater River, Meadow Lake, Nipawin and Lac La Ronge Provincial Parks; Fort a la Corne and Horsehide Lake Wildlife Management Units; and Bronson Forest Recreation Site	Sept. 1 - Dec. 13	5 daily (3 only may be white-fronted geese) 10 possession (6 only may be white-fronted geese)
	NOTE: Starting Oct. 1 in Zones 15 to 18, 20 to 22, 30 to 43 and 48 to 76: 3 additional Snow or Ross' geese may be taken daily, and 6 additional Snow or Ross' geese may be kept in possession. Starting Oct. 15 in Zones 1 to 14, 19, 23 to 29 and 44 to 47: 3 additional Snow or Ross' geese may be taken daily, and 6 additional Snow or Ross' geese may be kept in possession.		
	NOTE: Prior to Oct. 19, in Zones 1 to 59, 67, 68 and 69, any open season for geese includes that portion of the day from one-half hour before sunrise to 12:00 noon local time. From Oct. 20 to Dec. 13 geese may be hunted all day in all open zones.		

Appendix 10(a-f). Recent Saskatchewan Game Bird Hunting Regulations (1975-1985)

Appendix 10a. Saskatchewan Duck Hunting Regulations, 1975-1985
(See Appendix 21)

Year	Area * (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag)
1975	1-22	Sept 8 - Dec 20	8 (1 redhead or canvasback)
	23-37	Sept 1 - Dec 13	8 (1 redhead or canvasback)
1976	1-22	Sept 8 - Dec 18	8 (1 redhead or canvasback)
	23-37	Sept 1 - Dec 11	8 (1 redhead or canvasback)
1977	1-22	Sept 8 - Dec 17	6 (1 redhead or canvasback)
	23-37	Sept 1 - Dec 10	6 (1 redhead or canvasback)
1978	1-22	Sept 11 - Dec 16	6
	23-37	Sept 1 - Dec 9	6
1979	1-22	Sept 10 - Dec 15	8
	23-37	Sept 1 - Dec 8	8
1980	1-22	Sept 8 - Dec 13	8
	23-37	Sept 1 - Dec 6	8
1981 **	1-22	Sept 7 - Dec 12	8
	23-37	Sept 1 - Dec 5	8
1982	1-22	Sept 8 - Dec 11	8
	23-37	Sept 1 - Dec 4	8
1983	1-22	Sept 7 - Dec 10	8
	23-37	Sept 1 - Dec 3	8
1984 ***	1-42, 44-47, 52	Sept 5 - Dec 8	8
	43, 48-51, 53-76	Sept 1 - Dec 8	8
1985	1-42, 44-47, 52	Sept 11 - Dec 7	4
	43, 48-51, 53-76	Sept 2 - Dec 7	4

* Details omitted concerning some Wildlife Management Units (W.M.U.'s) and Provincial Parks. Hunting has traditionally been allowed in the following areas according to the regulations of the surrounding W.M.Z.'s: Last Mountain Lake, Pasquia and Porcupine W.M.U.'s; Meadow Lake, Nipawin and Lac la Ronge Provincial Parks; and Bronson Recreation Site.

** All special restrictions lifted from Canadian residents and non-residents.

*** 76 new wildlife management zones in effect

Appendix 10b. Saskatchewan Goose Hunting Regulations, 1977-1985
(Details omitted concerning local closures, Wildlife Management Units and Provincial Parks)

Year	Area (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag)
1977	1-6, 8, 9, 12-15, 22	Sept 28 - Dec 17	5 (2 whitefronts)
	7, 10, 11, 16-21	Sept 21 - Dec 17	5 (3 whitefronts)
	23-37	Sept 1 - Dec 10	5 (3 whitefronts)
	1-25, 28, 30, 32	Sept 1 - Oct 22	Morning Hunting Only
1978	1-6, 8, 9, 12-15, 22	Sept 27 - Dec 6	5 (2 whitefronts)
	7, 10, 11, 16-21	Sept 20 - Dec 16	5 (3 whitefronts)
	23-37	Sept 1 - Dec 9	5 (3 whitefronts)
	1-25, 28, 30, 32	Sept 1 - Oct 21	Morning Hunting Only
	All Zones	On and After Oct 16	3 Additional White Geese
1979	1-6, 8, 9, 12-15	Sept 26 - Dec 15	5 (2 whitefronts)
	7, 10, 11, 16-22	Sept 19 - Dec 15	5 (3 whitefronts)
	23-37	Sept 1 - Dec 8	5 (3 whitefronts)
	1-25, 28, 30-32	Sept 1 - Oct 20	Morning Hunting Only
	All Zones	On and After Oct 15	3 Additional White Geese
1980	1-6, 8, 9, 12-15	Sept 24 - Dec 13	5 (2 whitefronts)
	7, 10, 11, 16-22	Sept 17 - Dec 13	5 (3 whitefronts)
	23-37	Sept 1 - Dec 6	5 (3 whitefronts)
	1-25, 28, 30-32	Sept 1 - Dec 6	Morning Hunting Only
	All Zones	On and After Oct 15	3 Additional White Geese
1981	1-6, 8, 9, 12-15	Sept 23 - Dec 12	5 (2 whitefronts)
	7, 10, 11, 16-22	Sept 16 - Dec 12	5 (3 whitefronts)
	23-37	Sept 1 - Dec 5	5 (3 whitefronts)
	1-25, 28, 30, 32, 33	Sept 1 - Oct 20	Morning Hunting Only
	All Zones	On and After Oct 15	3 Additional White Geese
1982	1-6, 8, 9, 12-15	Sept 22 - Dec 11	5 (2 whitefronts)
	7, 10, 11, 16-22	Sept 15 - Dec 4	5 (3 whitefronts)
	23-37	Sept 1 - Dec 4	5 (3 whitefronts)
	1-25, 28, 30, 32	Sept 1 - Oct 20	Morning Hunting Only
	All Zones	On and After Oct 15	3 Additional White Geese
1983	1-6, 8, 9, 12-15	Sept 21 - Dec 10	5 (2 whitefronts)
	7, 10, 11, 16-22	Sept 14 - Dec 10	5 (3 whitefronts)
	23-37	Sept 1 - Dec 3	5 (3 whitefronts)
	1-25, 28, 30, 32, 33	Sept 1 - Oct 20	Morning Hunting Only
	1-37 (All Zones)	On and After Oct 15	3 Additional White Geese
1984	1-14, 18, 19, 20, 22-29	Sept 19 - Dec 8	5 (2 whitefronts)
	15, 16, 17, 21, 30-42, 44-47, 52	Sept 12 - Dec 8	5 (3 whitefronts)
	43, 48-51, 53-76	Sept 1 - Dec 8	5 (3 whitefronts)
	1-59, 67, 68, 69	Sept 1 - Oct 20	Morning Hunting Only
	1-76 (All Zones)	On and after Oct 15	3 additional Snow or Ross' Geese
1985	1-14, 19, 22-29	Sept 25 - Dec 7	5 (2 whitefronts)
	15, 16, 17, 18, 20, 21, 30-42, 44-47, 52	Sept 18 - Dec 7	5 (3 whitefronts)
	43, 48-51, 53-76	Sept 2 - Dec 7	5 (3 whitefronts)
	1-59, 67, 68, 69	Sept 2 - Oct 19	Morning Hunting Only
	1 -76 (all zones)	On and after Oct 15	3 additional Snow or Ross' Geese

Appendix 10c. Saskatchewan Sharp-tailed Grouse Hunting Regulations, 1976-1985

Year	Area* (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag limit)
1976	1-6, 8, 18-37	Sept 27 - Nov 13	5
	7, 9-17	Sept 27 - Nov 13	3
1977	1-22	Sept 26 - Nov 19	5
	23-36	Sept 12 - Nov 5	5
	37	Sept 5 - Nov 5	5
	Moose Mountain Park	Sept 26 - Oct 22	5
1978	1-22	Sept 25 - Nov 11	5
	23-33	Sept 18 - Nov 11	5
	34-37	Sept 4 - Nov 4	5
	Moose Mountain Park	Sept 25 - Oct 28	5
1979	1-22	Sept 24 - Nov 10	5
	23-33	Sept 17 - Nov 10	5
	34-37	Sept 3 - Nov 3	5
	Moose Mountain Park	Sept 24 - Oct 27	5
1980	1-33	Sept 22 - Nov 15	5
	34-37	Sept 1 - Nov 29	5
	Moose Mountain Park	Sept 22 - Oct 25	5
1981 **	1-33	Sept 21 - Nov 14	5
	34-37	Aug 31 - Dec 5	5
	Moose Mountain Park	Sept 21 - Oct 24	5
	Elbow, Estevan-Cambria and Lomond #3 W.M.U.'s	Oct 7 - Nov 14	5
1982	1, 7, 8 (east Hwy #2), 9-22	Oct 4 - Nov 13	5
	2-6, 8 (west Hwy #2)	Oct 13 - Nov 13	5
	23-33	Oct 4 - Nov 27	5
	34-37	Aug 30 - Nov 27	5
1983 ***	1-4, 7-15	Oct 3 - Nov 12	5
	5, 6	Oct 3 - Nov 12	3
	16-22	Sept 26 - Nov 12	5
	23-37	Sept 5 - Dec 3	5
1984****	1-8, 15-30	Oct 1 - Nov 10	5
	9-14	Oct 1 - Nov 10	3
	31-47	Sept 24 - Nov 10	5
	48-76	Sept 10 -Dec 1	5
1985****	1-47	Sept 30 - Nov 16	3
	48-76	Sept 9 - Nov 30	3

* Details omitted concerning some Wildlife Management Units and Provincial Parks. Hunting has traditionally been allowed in the following areas according to the regulations pertaining to the surrounding W.M.Z.'s: Elbow, Last Mountain Lake, Fort a la Corne, Estevan-Cambria, Lomond #3, Pasquia and Porcupine W.M.U.'s; Nipawin, Meadow Lake and Lac la Ronge Provincial Parks; and Bronson Recreation Site.

** All special restrictions lifted from Canadian residents; non-residents permitted to hunt in Zone 5.

*** Non-residents of Canada not permitted to hunt in Zones 5, 6, 14, and 15.

**** Non residents of Canada may not hunt Sharp-tailed grouse in Zones 9-14 and 25-28.

Appendix 10d. Saskatchewan Hungarian Partridge Hunting Regulations, 1976-1985

Year	Area * (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag limit)
1976	1-6, 8	Sept 27 - Nov 13	6
	7, 9-22	Sept 27 - Nov 13	3
1977	1-15	Sept 26 - Nov 19	7
	16-22	Sept 26 - Nov 19	5
1978	1-9	Sept 25 - Nov 11	6
	10-22	Sept 25 - Nov 11	3
1979	1-16	Sept 24 - Nov 10	6
	17-22	Sept 24 - Nov 10	3
1980	1-16	Sept 22 - Nov 15	6
	17-22	Sept 22 - Nov 15	3
1981 **	1-16	Sept 21 - Nov 14	6
	17-22	Sept 21 - Nov 14	3
	Elbow, Estevan-Cambria and Lomond #3 W.M.U.'s	Oct 7 - Nov 14	6
1982	1, 7, 8 (west Hwy #2), 9-16	Sept 27 - Nov 13	5
	2-6, 8 (east Hwy #2)	Oct 13 - Nov 13	5
	Elbow, Estevan-Cambria and Lomond #3 W.M.U.'s	Oct 4 - Nov 13	5
	17-22	Sept 27 - Nov 13	3
1983 ***	1-12	Sept 26 - Nov 12	10
	Some W.M.U.'s	Oct 3 - Nov 12	10
	13-22	Sept 26 - Nov 12	5
1984****	1-24	Sept 24 - Nov 10	10
	Elbow, Estevan-Cambria and Lomond #3 WMU's	Oct 1 - Nov 10	10
	25-47	Sept 24 - Nov 10	5
	48-55 (including Fort a la Corne)	Sept 10 - Nov 10	5
1985****	1-14, 19	Sept 23 - Nov 16	10
	15-18, 20-26 and Starting September 30, Elbow, Estevan-Cambria, and Lomond #3 W.M. Units	Sept 23 - Nov 16	5
	27-55 including Fort a la Corne	Sept 23 - Nov 16	3

* Details omitted concerning some Wildlife Management Units (W.M.U.'s) and Provincial Parks. Hunting has traditionally been allowed in the following areas, according to the regulations pertaining to the surrounding W.M.Z.'s: Elbow and Last Mountain Lake Wildlife Management Units.

** Special restrictions lifted from Canadian residents.

*** Non-residents of Canada not permitted to hunt partridge in Zones 5, 6, 14, and 15.

**** Non residents of Canada may not hunt Hungarian Partridge in Zones 9-14 and 25-28.

Appendix 10e. Saskatchewan Pheasant Hunting Regulations, 1975-1985
NOTE: Only Saskatchewan Residents may hunt pheasants

(Cock Birds Only)

Year	Area * (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag limit)
1975	1-6	Oct 6 - Nov 15	4
	7-17	Oct 6 - Nov 15	3
	6	Dec 8 - Dec 27	4
1976	7, 16, 17	Oct 4 - Oct 23	2
	1-6, 8	Oct 4 - Nov 13	5
	5, 9-15	Oct 4 - Nov 13	2
	6	Dec 6 - Jan 1/77	5
1977	1-17	Oct 3 - Nov 19	5
	6	Dec 5 - Dec 31	5
1978	1-17	Oct 2 - Nov 11	5
	6	Dec 4 - Dec 30	5
1979	1-17	Oct 1 - Nov 10	5
	6	Dec 3 - Dec 29	5
1980	1-17	Oct 6 - Nov 15	5
	6	Dec 1 - Jan 3/81	5
1981	1-17 including Last Mountain Lake, Estevan-Cambria & Lomond #3 W.M.U.'s	Oct 7 - Nov 14	5
	1-5, 8	Nov 30 - Dec 12	5
	6	Nov 30 - Jan 2/82	5
1982	1-17	Oct 7 - Nov 14	5
	1-9, 12, 17	Nov 26 - Dec 18	5
1983	1-17	Oct 5 - Nov 12	5
	1-9, 12, 17	Nov 28 - Dec 17	5
1984	1-36 (includes Elbow Estevan-Cambria & Lomond WMU's)	Oct 3 - Nov 10	5
	1-20, 23, 24, 31, 35, 36	Nov 26 - Dec 15	5
1985	1-36 including Elbow, Estevan-Cambria & Lomond 3 WM Units	Oct 2 - Nov 16	3
	1-24, 29, 31, 35, 36	Dec 2 - Dec 21	3

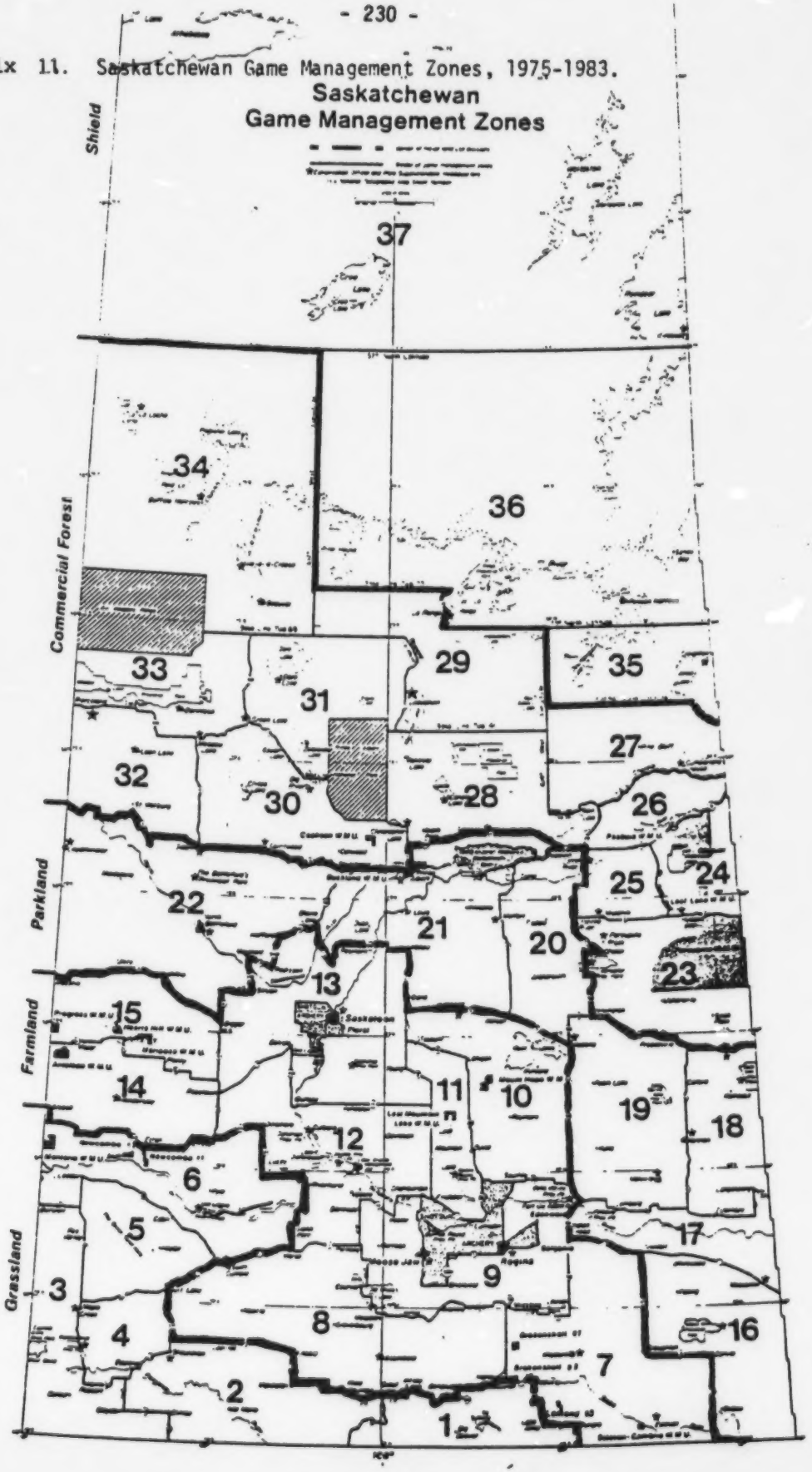
* Details omitted concerning some Wildlife Management Units (W.M.U.'s). Hunting has traditionally been allowed in Elbow and Last Mountain Lake W.M.U.'s according to the regulations pertaining to the surrounding W.M.Z.'s. Seasons have been held in Estevan-Cambria and Lomond #3 W.M.U.'s since 1981.

Appendix 10f. Saskatchewan Ruffed Grouse Hunting Regulations, 1976-1985
(Details omitted concerning some Wildlife Management Units and Parks)

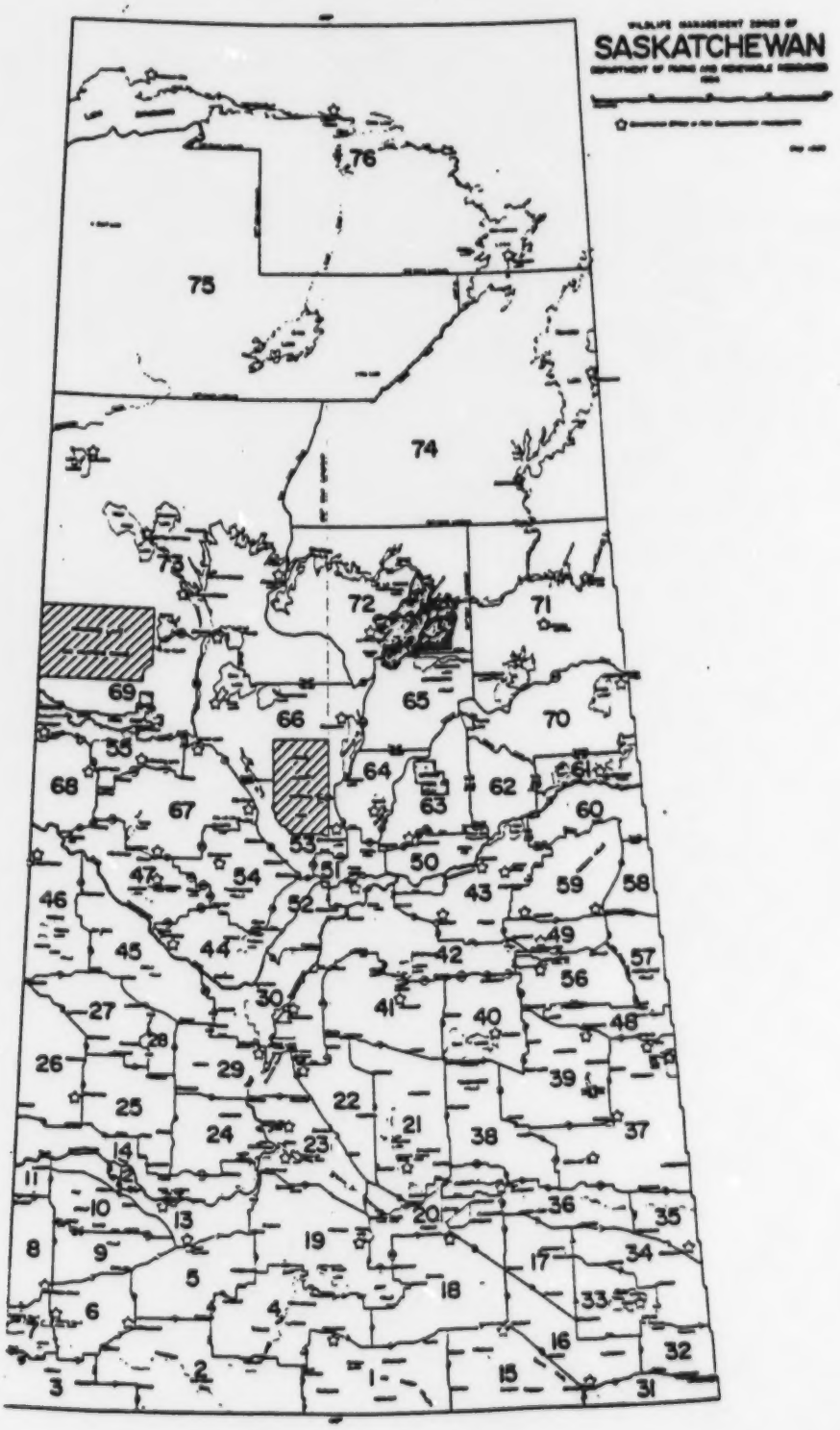
Year	Area (Wildlife Management Zone)	Hunting Season Dates	Daily Bag Limit (Possession is twice the daily bag limit)
1976	1-15	Sept 27 - Nov 13	4
	16-22	Sept 27 - Nov 13	6
	23-37	Sept 20 - Dec 4	6
1977	1-15	Sept 26 - Nov 19	5
	16-22	Sept 26 - Nov 19	5
	23-36	Sept 12 - Dec 10	10
	37	Sept 5 - Dec 10	10
	Moose Mountain Park	Sept 26 - Oct 22	10
1978	1-15	Sept 25 - Nov 11	5
	16-22	Sept 25 - Nov 11	10
	23-37	Sept 4 - Dec 2	10
	Moose Mountain Park	Sept 25 - Oct 28	10
1979	1-15	Sept 24 - Nov 10	5
	16-22	Sept 24 - Nov 10	10
	23-37	Sept 3 - Dec 1	10
	Moose Mountain Park	Sept 24 - Oct 27	10
1980	1-22	Sept 22 - Nov 15	5
	23-37	Sept 1 - Dec 6	5
	Moose Mountain Park	Sept 22 - Oct 25	5
1981 **	1-22	Sept 21 - Nov 14	5
	23-37	Aug 31 - Dec 5	5
	Elbow W.M.U.	Oct 7 - Nov 14	5
	Moose Mountain Park	Sept 21 - Oct 24	5
1982	1-22	Sept 27 - Nov 13	5
	23-33	Sept 13 - Nov 27	5
	34-37	Aug 30 - Nov 27	5
	Elbow W.M.U.	Oct 4 - Nov 13	5
	Moose Mountain Park	Nov 1 - Nov 24	5
	Greenwater Lake Park	Nov 1 - Nov 27	5
1983	1-22	Sept 26 - Nov 12	5
	23-37	Sept 5 - Dec 3	5
	Elbow W.M.U.	Oct 3 - Nov 12	5
	Moose Mountain Park	Oct 31 - Nov 26	5
	Greenwater Lake Park	Oct 24 - Dec 3	5
1984*	1-47	Sept 24 - Nov 10	5
	48-76	Sept 10 - Dec 1	5
1985	1-47, including Last Mountain Lake and Elbow Wildlife Management Units	Sept 23 - Nov 16	5
	48-76	Sept 9 - Nov 30	5

* 76 new wildlife management zones in effect

Appendix 11. Saskatchewan Game Management Zones, 1975-1983.



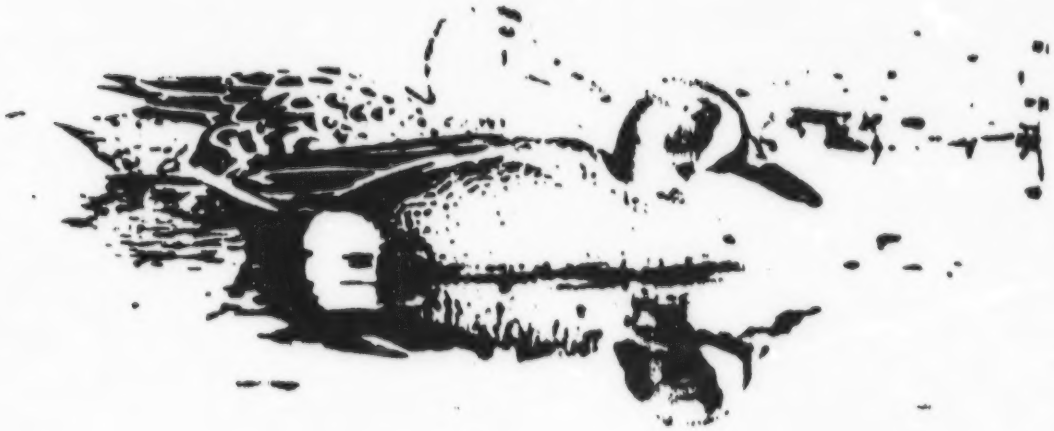
Appendix 12. Saskatchewan Wildlife Management Zones 1985



Appendix 13. 1985 Saskatchewan Game Bird Hunter Survey Questionnaire

Saskatchewan
Parks and
Renewable
Resources
Hon. Colin Maxwell
Minister

1985 Saskatchewan Game Bird Hunter Survey



A MESSAGE FROM THE DIRECTOR OF WILDLIFE

Fellow Sportsman:

We are again asking for your support with the annual Game Bird Hunter Survey.

Please use the attached form to record your bird hunting activities, then mail the form in the enclosed postage paid envelope when you are finished hunting for the year.

As a hunter, you will be interested in the results of last year's survey. The last page, which is yours to keep, summarizes the 1984 game bird harvest.

This survey provides the information we need to set responsible quotas and season dates and ensures that the sportsmen of Saskatchewan will continue to enjoy recreational hunting opportunities in the future. Because the names for the survey are selected randomly every year for statistical accuracy, you may receive a questionnaire two or more years in a row.

We greatly appreciate your assistance with the Game Bird Hunter Survey. By doing so, you contribute to better wildlife management in Saskatchewan.

Hoping your 1985 hunting season is successful.

Dennis Sherratt
Director
Wildlife Branch
Saskatchewan Parks and Renewable Resources

1985 Saskatchewan Game Bird Hunter Survey

1. If you **did not** purchase a 1985 Saskatchewan Game Bird Licence please check ☑ here [ ] and return immediately, thank you.

2. Check ☑ each hunting licence you purchased in 1985, even if you were unsuccessful.
   Saskatchewan Game Bird Licence [ ] Migratory Game Bird Permit [ ]

3. Check ☑ each game bird you hunted in 1985.

Sharp-tailed Grouse	[ ]	Pheasant	[ ]	Ptarmigan	[ ]
Hungarian Partridge	[ ]	Ducks	[ ]	Coots	[ ]
Ruffed Grouse	[ ]	Geese	[ ]	Common Snipe	[ ]
Spruce Grouse	[ ]	Sandhill Cranes	[ ]		

4. **Please record all your hunting activities, whether or not you bagged any birds.**
   - **Use a separate line for each date you hunted; if you hunted in more than one wildlife management zone on a given date, use a separate line for each zone. (See example below).**
   - **Use the following guide for recording the amount of time you hunted.**
     (4 or more hours = 1 day less than 4 hours = ½ day)
   - **Check** ☑ Upland Birds or Migratory Birds, or both, depending on what you hunted in each time period recorded.
   - Record the number of birds you bagged.
   - Check ☑ any species you hunted but did not bag.
   - See examples.

	Date	Wildlife Mgmt Zone	Time Hunted		Upland Birds	Migratory Birds	Upland Birds					Migratory Birds						
												Ducks		Geese				
			½ Day	Day			Sharp-tailed Grouse	Hungarian Partridge	Ruffed Grouse	Spruce Grouse	Pheasant	Mallards	Others	Canadas	White-fronts	Snows (& Blues)	Ross	Sandhill Cranes
EXAMPLES	Oct. 22	5		√	√		√	2			1							
	Oct. 22	18		√	√	√	1	√				1						
	Nov. 5	45	√			√						2	1	1	1			
	Nov. 9	55		√	√				√									

Hunter Comments?

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13531

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HUNTERS: This page is yours to keep.

Please tear off this section before mailing back the questionnaire in the enclosed, postage-paid envelope.

SEPTEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

OCTOBER

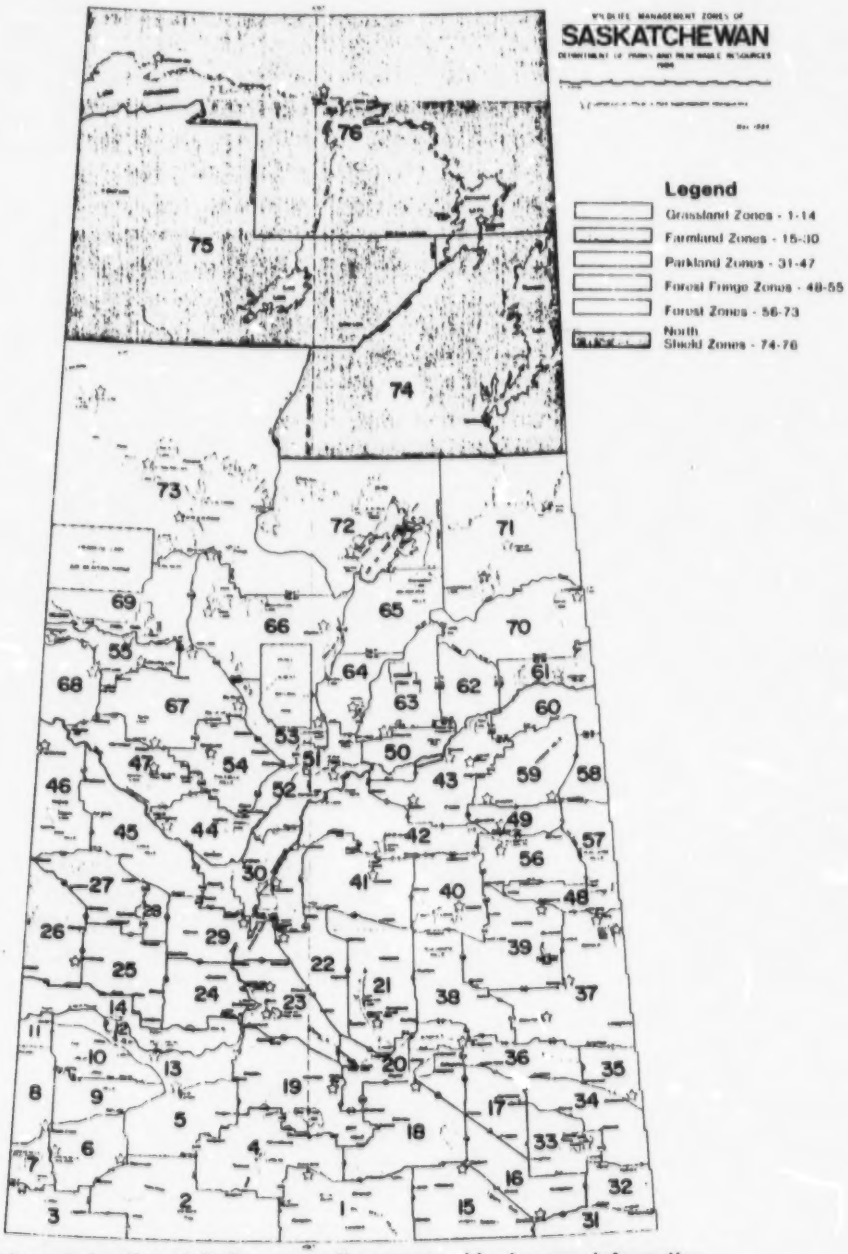
S	M	T	W	T	F	S
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		

NOVEMBER

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
17	18	19	20	21	22	23
24	25	26	27	28	29	30

DECEMBER

S	M	T	W	T	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				



Last year's hunting statistics are on the reverse side, for your information.

1984 Game Bird Hunting Activity

Both duck and goose hunting activity were down in the fall of 1984, with 25 per cent fewer active hunters taking to the field. Factors responsible for last year's low mallard harvest numbers include 43 per cent fewer spring ponds, the early snowfalls in September and October which kept many hunters out of the field, and drought conditions.

Sandhill crane hunting remained at 1983 levels. 73 per cent of the harvest came from Wildlife Management Zone 21 — the Last Mountain Lake area.

Upland bird hunting remained at or near 1983 levels. However, ruffed grouse populations did not rebound as much as expected. The pheasant harvest dropped slightly, due to 21 percent fewer hunters.

Total game bird licence sales were down about 15 per cent.

	Harvest					Active Hunters				
	1980	1981	1982	1983	**1984**	1980	1981	1982	1983	**1984**
Ducks	398,000	240,000	292,000	326,000	**183,000**	40,000	30,000	34,000	35,000	**24,000**
Geese	185,000	159,000	155,000	213,000	**162,000**	35,000	29,000	32,000	36,000	**27,000**
Sandhill Cranes	4,200	2,200	3,500	3,000	**3,100**	1,700	1,000	1,500	1,200	**1,300**
Sharp-tailed Grouse	108,000	83,000	52,000	59,000	**54,000**	28,000	24,000	20,000	21,000	**17,000**
Hungarian Partridge	66,000	64,000	42,000	61,000	**60,000**	21,000	20,000	17,000	19,000	**15,500**
Ruffed Grouse	92,000	37,000	17,000	13,500	**13,000**	18,000	14,000	10,000	8,800	**6,700**
Spruce Grouse	12,000	6,000	3,200	4,000	**4,300**	3,800	3,100	1,900	1,600	**1,500**
Pheasant	12,000	13,000	7,500	16,000	**12,000**	4,200	4,800	3,900	6,300	**5,000**

More detailed information concerning game bird management can be obtained from Wildlife Branch, Saskatchewan Parks and Renewable Resources, 3211 Albert Street, Regina, Saskatchewan S4S 5W6 or your local Parks and Renewable Resources office.

Saskatchewan

Saskatchewan
Parks and
Renewable
Resources

3211 Albert Street
Regina, Canada
S4S 5W6

Your File:
Our File:

December 9, 1985

Fellow Sportsman:

This is a friendly reminder to return the Game Bird Hunter Survey we sent you in September. However, **please disregard this letter if you are planning to do more bird hunting, or if you recently mailed your survey.**

We have enclosed another survey form and a self-addressed, postage-paid envelope in case the first set went astray.

By completing and returning the Game Bird Hunter Survey, you will be providing the Wildlife Branch with essential hunting information which cannot be obtained without your assistance. Information from last year's survey appears on the back of the enclosed form and in the 1985 Hunting Synopsis.

I am sure I can count on you to help in this way with Saskatchewan's wildlife management.

Sincerely,

Dennis Sherratt

Dennis Sherratt
Director
Wildlife Branch
Saskatchewan Parks and Renewable Resources

Appendix 14. 1985 Saskatchewan Game Bird Hunter Survey Follow Up Letter

Appendix 15.
Criteria to be used to determine duck bag limits in Saskatchewan during stabilized hunting regulations, 1979-1984.

1. The duck bag limit in Saskatchewan will be 8 birds per day, 16 in possession with no species restriction except where:

   - $P + M \leq 3.0$ m. or $M \leq 1.75$ m. when the bag limit = 6 per day; 12 in possession.
   - $P + M \leq 2.5$ m. or $M \leq 1.5$ m. when the bag limit = 4 per day; 8 in possession.

   When bag limits identified by P + M differ from M, P + M limits will be implemented only when similar P + M values occur for 2 years in a row.

2. The third option (4 bag limit) is considered a response to a crisis situation and will be considered only when equivalent harvest reductions are implemented throughout the Central and Mississippi Flyways.

(After Prairie Waterfowl Harvest Program 1979-84 - Saskatchewan).

Note: where P is the number of May ponds and M is the number of breeding mallards in southern Saskatchewan (strata 30 to 35) and m = million.

i.e. If the number of May ponds and breeding mallards totals less than 3 million or the breeding mallard population is less than 1.75 million the daily bag and possession limits will be 6 and 12.

Appendix 16. Sharp-tailed Grouse Reproduction* in Saskatchewan, 1985

Wildlife Management Area	Sample Size	% Juveniles	Juveniles/Adult
GRASSLAND	73	52	1.08
FARMLAND	191	66	1.94
PARKLAND	92	58	1.36
FOREST FRINGE* + FOREST	29	90	8.67
PROVINCE	385	63	1.71

* Based on sample of wings from hunter-killed birds. Areas with samples of less than 50 not shown.

Appendix 17. Hungarian Partridge Reproduction* in Saskatchewan, 1985

Wildlife Management Area	Sample Size	% Juveniles	Juveniles/Adult
4	96	81	4.33
5	80	76	3.21
GRASSLAND	273	77	3.40
15	60	82	4.45
FARMLAND	205	80	3.88
PARKLAND *	14	78	3.67 *
PROVINCE	492	78	3.60

* Based on sample of wings from hunter-killed birds. Areas with samples of less than 50 not shown.

Appendix 18. Ruffed Grouse Reproduction* in Saskatchewan, 1985

Wildlife Management Area	Sample Size	% Juveniles	Juveniles/Adult
FARMLAND	19	53	1.11*
PARKLAND	74	78	3.62
FOREST FRINGE	72	76	3.23
56	75	79	3.69
67	182	81	4.35
FOREST	329	79	3.77
PROVINCE	494	78	3.45

* Based on sample of wings from hunter-killed birds. Areas with samples of less than 50 not shown

APPENDIX 19. 1985-86 Midwinter Waterfowl Survey

UNITED STATES SUMMARY
MIDWINTER WATERFOWL SURVEY
1986

FLYWAY	Atlantic	Mississippi	Central	Pacific	U.S. Total 1986	U.S. Total 1985
Mallard	160,100	2,152,100	799,800	1,281,800	4,393,800	4,799,900
Black duck	225,900	96,500	TR		322,400	278,900
Mottled duck	1,000	52,000	43,400		96,400	86,700
Gadwall	11,000	711,500	108,000	39,700	870,200	832,600
Wigeon	35,000	232,100	39,600	377,200	683,900	668,600
G-W teal	68,300	425,800	220,100	185,300	899,500	1,045,100
B-W teal	22,000	85,300	13,800	3,700	124,800	94,700
Cinn. teal						
Shoveler	8,500	155,000	68,200	262,600	494,300	492,400
Pintail	47,400	436,400	335,600	1,254,800	2,074,200	2,159,500
Wood duck	2,200	31,800	8,700	300	43,000	46,100
Whistling duck	500		3,900		4,400	3,200
Total Dabblers	581,900	4,378,500	1,641,100	3,405,400	10,006,900	10,507,700
Redhead	61,800	4,200	276,700	18,900	361,600	238,800
Canvasback	96,100	127,400	27,600	44,600	295,700	282,900
Scaup	410,900	228,600	116,200	223,800	979,500	1,215,200
Ringneck	44,600	189,400	14,800	13,000	261,800	297,200
Goldeneye	41,100	62,400	14,100	41,900	159,500	132,900
Bufflehead	41,800	3,100	3,300	46,000	94,200	110,800
Ruddy duck	51,900	36,900	6,500	73,300	168,600	203,500
Total Divers	748,200	652,000	459,200	461,500	2,320,900	2,481,300
Eider	59,000	TR			59,000	163,400
Scoter	29,800	TR		165,200	195,000	160,000
Oldsquaw	12,500	1,200		600	14,300	15,500
Harlequin	TR	TR		300	300	100
Total Seaducks	101,300	1,200		166,100	268,600	339,000
Mergansers	89,400	41,000	84,500	29,400	244,300	219,000
Unident. ducks	6,200	4,900	7,700	39,500	58,300	27,600
TOTAL DUCKS	1,527,000	5,077,600	2,192,500	4,101,900	12,899,000	13,574,600
Brant	110,300			13,800	124,100	159,600
Snow goose						
Blue goose	99,700	611,700	934,000	557,200	2,202,600	2,596,000
Ross' goose						
White-fronted goose		78,600	93,000	53,700	225,300	270,400
Canada goose	905,400	1,097,300	333,000	280,500	2,816,200	2,763,200
TOTAL GEESE	1,115,400	1,787,600	1,360,000	905,200	5,368,200	5,789,200
Whistling swan	90,900	TR		66,100	157,000	143,100
Trumpeter swan		100	200	1,400	1,700	1,100
Mute swan	4,400	500		TR	4,900	5,500
TOTAL SWANS	95,300	600	200	67,500	163,600	149,700
COOT	290,700	727,800	158,000	133,800	1,310,300	1,213,800
GRAND TOTAL	3,028,400	7,593,600	3,910,700	5,208,400	19,741,100	20,727,300

* TRace=Fewer than 50.

Appendix 20. AREAS OF NEW WILDLIFE MANAGEMENT ZONES

Zone	Area in Km^2	Zone	Area in Km^2
P.A.N.P.	3 874	PRIMROSE A.W.R.	5 987
1	8 321	2	10 640
3	4 297	4	8 118
5	5 966	6	4 195
7	1 895	8	3 393
9	3 435	10	3 546
11	985	12	344
13	4 084	14	5 580
GRASSLAND TOTAL			64 799
15	6 724	16	5 307
17	3 823	18	7 448
19	9 221	20	5 534
21	8 382	22	4 732
23	5 740	24	4 829
25	5 818	26	4 415
27	4 914	28	1 355
29	5 333	30	7 251
FARMLANDS TOTAL			90 836
31	2 522	32	2 790
33	3 883	34	5 386
35	2 614	36	5 185
37	11 315	38	6 412
39	7 603	40	5 414
41	7 212	42	7 413
43	6 777	44	4 577
45	7 665	46	5 959
47	5 719		
PARKLANDS TOTAL			90 446
48	2 531	49	2 395
50	3 333	51	2 873
52	2 913	53	2 772
54	5 696	55	3 749
FOREST FRINGE TOTAL			26 262
56	4 727	57	3 308
58	2 245	59	5 862
60	3 837	61	3 040
62	3 735	63	5 659
64	3 544	65	6 521
* 66	11 280	67	8 675
68	4 158	** 69	7 750
70	8 499	71	17 990
72	18 381	73	45 909
FOREST TOTAL			165 120
74	45 416	75	56 558
76	79 825		
NORTHERN SHIELD TOTAL			181 799
PROVINCIAL TOTAL			637 113

* excludes P.A.N.P.
** excludes Primrose A.W.R.

Appendix 21. Past Saskatchewan Duck Regulations and Numbers

Year	DAILY BAG (All Ducks)	(Mallards)	SEASON DATES (North/South)	ESTIMATED HARVEST (All Ducks)	(Mallards)	HARVEST CHANGE MALLARDS ± % **	MIGRATORY PERMIT SALES	MALLARDS HARVESTED PER PERMIT HOLDER	MALLARD BREEDING POS. SOUTHERN SASK. (Thousands)	± %	MAY PONDS SOUTHERN SASK. (Thousands)	± %	MALLARD WING BEE AGE RATIOS IMM:1 Ad	LATE NESTING INDEX FOR MALLARDS	X BROOD SIZE
1965	5 (2 canvas or redhead)	3	Sept 11-Nov 27/Sept 25-Dec 4	337,870	219,447		45,469	4.83	1104.1		2269.7				
*1966	6 (2 canvas or redhead)	3	Sept 5-Nov 26/Sept 19-Dec 3	427,219	256,448	+17	44,744	5.73	1965.6	+78	2664.7	+17			
1967	8 (2 canvas)	5	Sept 4-Dec 2/Sept 18-Dec 2	466,556	301,479	+17	44,651	6.75	2015.8	+ 3	2652.0	NC	1.79		
1968	5 (2 canvas)	3	Sept 9-Dec 7/Sept 28-Dec 7	380,806	196,281	-35	43,596	4.50	2119.9	+ 5	1159.3	-56	0.90		
*1969	7 (1 canvas)	5 in SW 4 in SE	Sept 8-Dec 6/Sept 27-Dec 6	576,352	367,406	+87	45,347	8.10	2164.1	+ 2	2208.6	+90	3.69		
					x = 268,211 (1965-69)										
1970	10 (1 canvas)	8	Sept 7-Dec 7/Sept 14-Dec 31	822,285	575,775	+57	47,722	12.06	2938.3	+36	3828.4	+37	4.10		
1971	10 (1 canvas)	8	Sept 4-Dec 23/Sept 11-Dec 31	705,421	505,665	-12	49,448	10.23	3401.5	+16	2354.2	-22	2.37		
1972	10 (1 canvas)	8	Sept 4-Dec 23/Sept 11-Dec 30	507,232	362,137	-28	50,004	7.24	2670.9	-21	2303.9	- 2	1.54		
1973	8 (1 redhead or canvas)	8	Sept 3-Dec 22/Sept 10-Dec 29	371,974	281,125	-22	51,307	5.48	2367.0	-11	1458.1	-37	1.79		
1974	8 (1 redhead or canvas)	8	Sept 2-Dec 21/Sept 9-Dec 28	612,946	446,523	+59	51,504	8.67	2079.5	-12	3740.0	+156	2.57		
1975	8 (1 redhead or canvas)	8	Sept 1-Dec 13/Sept 8-Dec 20	711,079	536,251	+20	57,723	9.29	2443.1	+17	3402.0	- 9	2.94		
1976	8 (1 redhead or canvas)	8	Sept 1-Dec 11/Sept 8-Dec 18	746,527	581,260	+ 8	61,669	9.42	3026.5	+24	2579.6	-24	2.24	69.4	4.5
1977	6 (1 redhead or canvas)	6	Sept 1-Dec 10/Sept 8-Dec 17	457,950	365,771	-37	60,029	6.09	2866.8	- 5	1249.8	-51	1.61	63.4	5.3
1978	6	6	Sept 1-Dec 9/Sept 11-Dec 16	484,663	317,838	-13	57,958	5.48	1911.3	-33	2221.4	+78	1.47	55.4	4.7
1979	8	8	Sept 1-Dec 8/Sept 10-Dec 15	553,790	432,351	+36	56,174	7.70	2237.1	+17	3849.7	+38	1.95	87.3	5.3
1980	8	8	Sept 1-Dec 6/Sept 8-Dec 13	397,600	322,050	-25	54,081	5.95	2138.8	- 4	1393.6	-55	1.31	23.3	4.6
1981	8	8	Sept 1-Dec 5/Sept 7-Dec 12	239,753	195,953	-39	42,856	4.57	1504.6	-30	610.8	-56	1.23	22.3	4.2
1982	8	8	Sept 1-Dec 4/Sept 8-Dec 11	291,539	222,317	+13	47,236	4.71	1944.4	+29	2204.5	+261	1.28	62.0	4.8
1983	8	8	Sept 1-Dec 3/Sept 7-Dec 10	326,100	244,541	+10	45,383	5.39	1713.7	-12	2696.4	+22	2.12	47.1	4.5
1984	8	8	Sept 1-Dec 8/Sept 5-Dec 8	182,706	140,764	-42	37,720	3.73	1412.1	-18	1511.3	-44	1.63	21.8	4.6
1985	4	4	Sept 2-Dec 7/Sept 11-Dec 7						1334.7	-5	2958.0	+96		28.1	5.3
					x = 259,863 (1979-84)										

* Note: In 1966 and 1969, a bonus bag of 2 additional scaup or goldeneye after October 11 could be taken.
** All changes are from prior year.